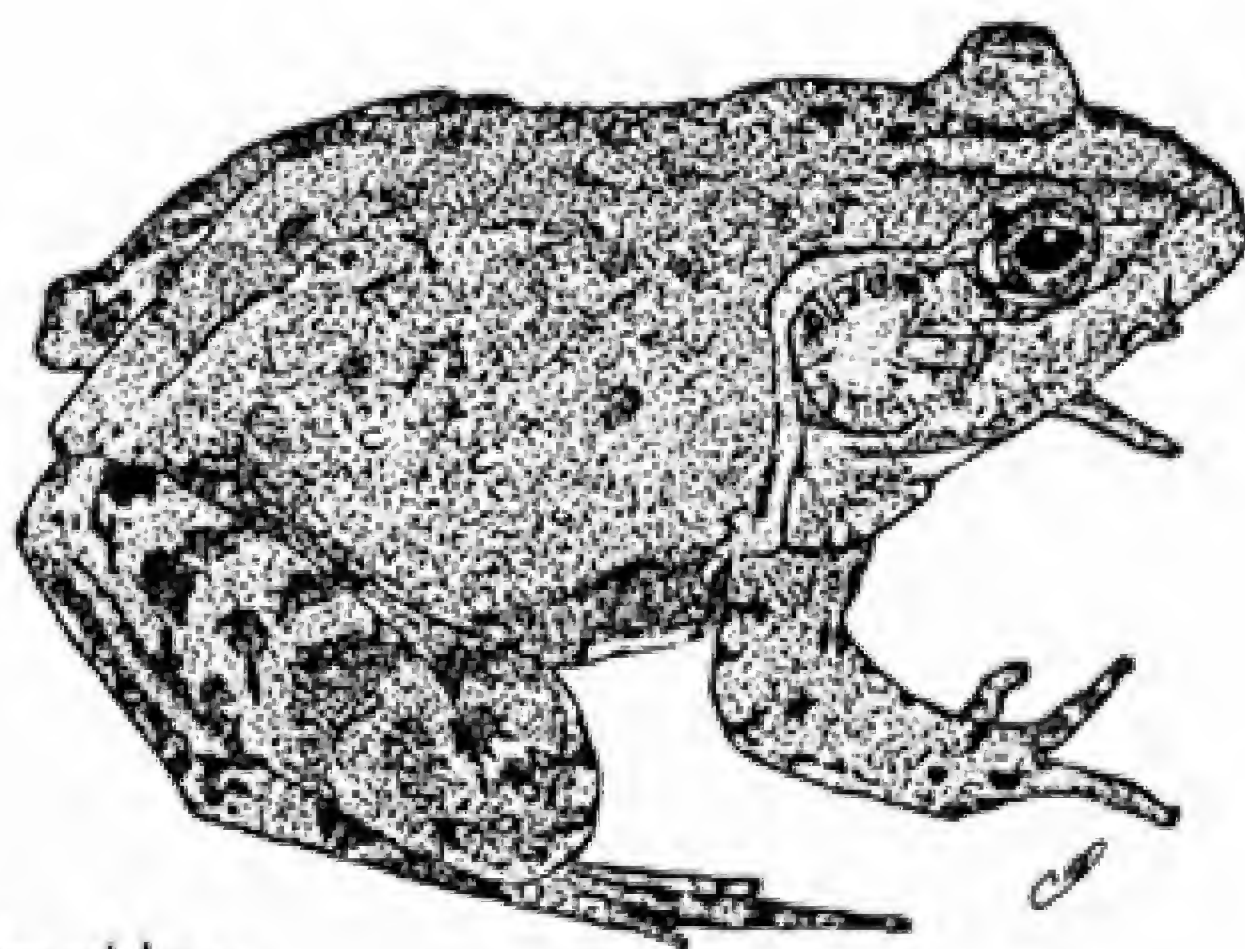


CATESBEIANA



Rana catesbeiana
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BULLETIN INFORMATION

Catesbeiana is published twice a year by the Virginia Herpetological Society. Membership is open to all individuals interested in the study of amphibians and reptiles and includes a subscription to *Catesbeiana*, two newsletters, and admission to all meetings. Annual dues for regular membership are \$15.00 (see application form on last page for other membership categories). Payments received after September 1 of any given year will apply to membership for the following calendar year. Dues are payable to: Dr. Paul Sattler, VHS Secretary/Treasurer, Department of Biology, Liberty University, 1971 University Blvd., Lynchburg, VA 24502.

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EDITORIAL POLICY

The principal function of *Catesbeiana* is to publish observations and original research about Virginia herpetology. Rarely will articles be reprinted in *Catesbeiana* after they have been published elsewhere. All correspondence relative to the suitability of manuscripts or other editorial considerations should be directed to Dr. Steven M. Roble, Editor, *Catesbeiana*, Virginia Department of Conservation and Recreation, Division of Natural Heritage, 217 Governor Street, Richmond, VA 23219.

Major Papers

Manuscripts being submitted for publication should be typewritten (double spaced) on good quality 8½ by 11 inch paper, with adequate margins. Consult the style of articles in this issue for additional information, including the appropriate format for literature citations. The metric system should be used for reporting all types of measurement data. Computer diskettes (Word or WordPerfect format) are desired for longer papers. Submissions concerning the herpetofauna of selected areas, such as a state park or county, should be prepared in article rather than field note format. Articles will be refereed by the editor and at least one other qualified reviewer. All changes must be approved by the author before publication; therefore, manuscripts must be received by the editor before the first of March and September to be considered for publication in the spring or fall issue, respectively, of *Catesbeiana*. Reprints of articles are not available to authors; however, authors may reprint articles themselves to meet professional needs.

(Editorial policy continued on inside back cover)

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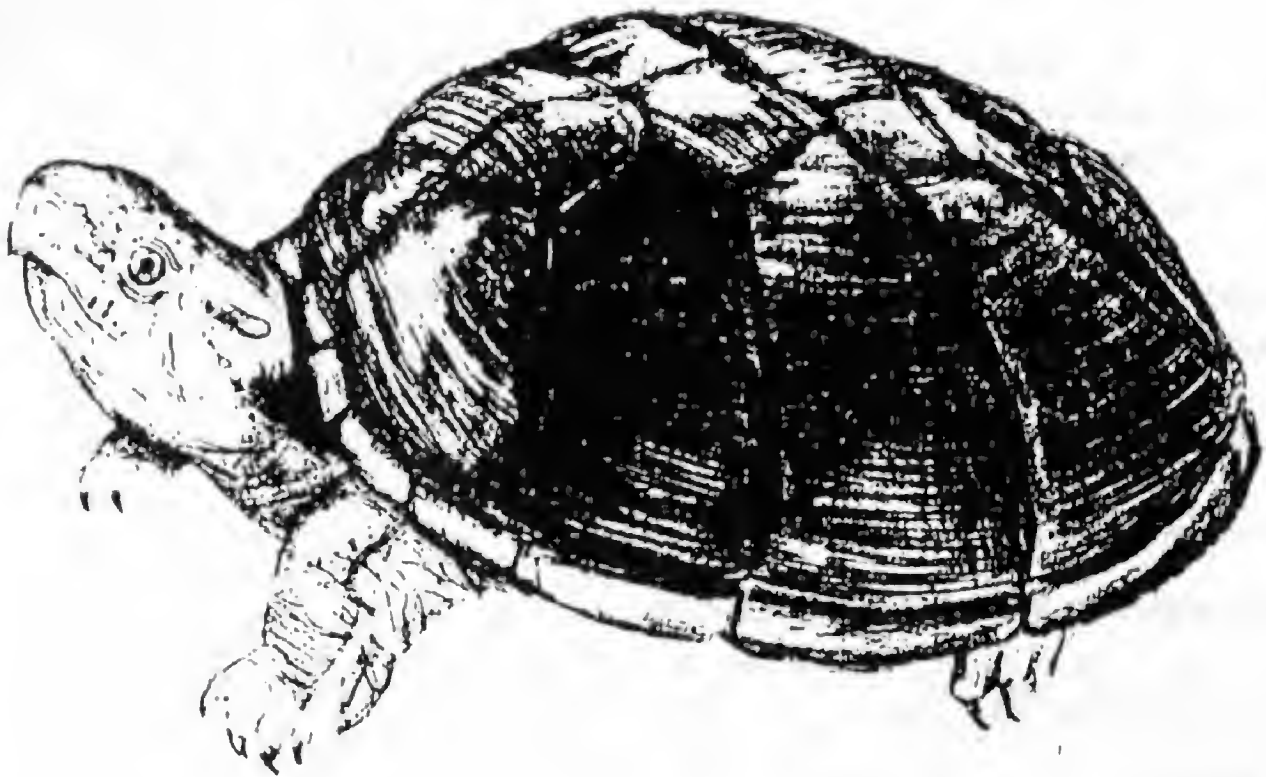
Spring 2000

No. 1

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Next Meeting
May 19-20, 2000
White Stone and Lively, Virginia
See page 56 for details



Eastern Mud Turtle (*Kinosternon subrubrum subrubrum*).
Drawing by Sarah Church, 7th grade student at Pocahontas
Middle School, Powhatan, Virginia.

**Reptile and Amphibian Survey of Prince Edward-Gallion
State Forest, Sailor's Creek Historical State Park,
Twin Lakes State Park, and the Boswell Tracts**

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Since the arrival of the first European settlers in the southern Piedmont of Virginia, this region has experienced intensive land use management practices. First, land clearing activities provided timber and open land for farming. Then, generations of families farmed the land using practices which resulted in a loss of productivity over time, until by the mid-1930s land in this area was generally no longer profitable for farming. The southern Piedmont is now primarily a patchwork of pine and mixed hardwood-pine wood lots, abandoned farmland, and small livestock and farming operations. Within this patchwork are pockets of commercial and industrial production, as well as small towns and residential areas.

Herpetofaunal surveys in the southern Piedmont are generally lacking, with the ranges of many reptile and amphibian species being undetermined in this region. Additional survey work in the southern Piedmont likely will improve understanding of the range limits for a number of species, including the coastal plain cricket frog (*Acris gryllus gryllus*), Brimley's chorus frog (*Pseudacris brimleyi*), mud salamander (*Pseudotriton montanus*), spotted turtle (*Clemmys guttata*), southeastern five-lined skink (*Eumeces inexpectatus*), and southeastern crowned snake (*Tantilla coronata*) (Mitchell and Reay 1999). To date, no comprehensive survey of reptiles and amphibians has been conducted on Prince Edward-Gallion State Forest, Twin Lakes State Park, or Sailor's Creek Historical State Park. Surveys for reptiles and amphibians on these state-managed lands will provide the information required for inclusion of these faunal groups in future management plans.

The Virginia Herpetological Society (VHS) annually selects and conducts surveys for reptiles and amphibians on sites within the Commonwealth. These surveys focus on areas in need of additional sampling effort and generally require the area be available for future sampling. VHS survey sites are distributed throughout Virginia. This paper provides details of a three-day reptile and amphibian survey conducted on four land parcels (Figure 1) in the southern Piedmont of Virginia.

Study Sites

The southern Piedmont of Virginia is characterized by low rolling hills and clay soils. Across the region average annual rainfall is 104 - 119 cm, spread throughout the year. Streams are low gradient having sand and gravel substrates. Many streams contain a heavy silt load from historic and present-day land management practices. Seasonal fluctuations in stream flow occur due to high evapotranspiration rates and variability in precipitation, with lowest stream discharge occurring in late summer and early autumn, at which time groundwater inputs typically are the major source of discharge. Small impoundments are prominent throughout this region of Virginia.

Land in the southern Piedmont of Virginia, in the vicinity of Twin Lakes State Park and Prince Edward-Gallion State Forest, was primarily open farmland until the mid-1930s when the federal government began purchasing lands from struggling farmers under the Bankhead-Jones Farm Tenant Act. Lands purchased in Prince Edward County under the Act, in addition to 1394 ha (588 ac) deeded to the Commonwealth of Virginia in 1919 by Emmett O. Gallion, now comprise Prince Edward-Gallion State Forest and Twin Lakes State Park.

In 1939, the federal government leased lands acquired under the Bankhead-Jones Farm Tenant Act to the Commonwealth of Virginia, and, in 1954, deeded these lands to the Commonwealth. The Virginia Department of Forestry continues to acquire additional tracts of land such that, as of 1999, Prince Edward-Gallion State Forest covered 16,045 ha (6,496 ac). Habitat in the forest is primarily young hardwoods, mixed oak-pine forest, or cut over. A number of perennial streams run through the forest, some having their headwaters within the forest boundaries. Habitat in the forest is generally subject to disruption resulting from forestry activities.

Results of 1999 VHS Spring Survey

Twin Lakes State Park encompasses 1,213 ha (491 ac), including 40 ha (16 ac) Goodwin Lake and 49 ha (20 ac) Prince Edward Lake. Land within the park is primarily upland oak-hickory, and mixed pine-hardwood, with forested wetlands occurring along riparian corridors of several small streams within the park. Emergent marshy borders occur along the margins of both lakes to some extent, being more prevalent along Prince Edward Lake.

Sailor's Creek Historical State Park is located on 793 ha (321 ac) straddling the border of Prince Edward County and Amelia County. This area was the site of a battle between Union and Confederate forces during the waning stages of the Civil War. The land for this park was donated to the Commonwealth in 1937, with the park opening in 1948 following restoration of buildings within the park, including the Hillsman House. The areas of the park surveyed were forested riparian wetland along a perennial stream, and an old field with edge habitat along a tract of mixed upland forest.

In addition to the state-managed tracts, two privately held tracts in Prince Edward and Nottoway counties were surveyed. These tracts, which are owned by Mr. John Boswell (VHS member) provide access to two small Piedmont ponds with surrounding lands that are not as intensively managed as Prince Edward-Gallion State Forest or those of the two state parks. Survey efforts focused on these ponds and areas adjacent to the ponds.

Materials and Methods

Sampling by the VHS was conducted on May 21-23, 1999. Six teams of 2-7 individuals sampled pre-selected sites (Figures 2-5) on the state forest, state parks, and the Boswell tracts. Site selection was designed to obtain sampling coverage of all available habitat types, aquatic and terrestrial.

Male vocalizations and visual observations were used to document frogs and toads. Terrestrial salamanders were found by overturning rocks and logs in open and forested areas, and by breaking apart decaying woody debris and logs. Aquatic salamanders were sampled by examining aquatic vegetation along lake margins, and by overturning woody debris and streambed substrate in streams. Survey techniques for turtles included hoop nets with lead lines. Snakes were documented and collected by overturning available cover and by incidental visual observation. Photographs were taken of specimens whenever

possible. Habitat and behavior of specimens were recorded. All species locations were indicated on USGS 7.5 minute topographic maps.

Results

During the survey 16 species of amphibians (8 salamanders, 8 anurans [frogs and toads]) and 21 species of reptiles (6 turtles, 3 lizards, and 12 snakes) were observed. Thirteen amphibian and 11 reptile species were observed in Prince Edward-Gallion State Forest (PEGSF), while 7 amphibian and 12 reptile species were found on the Boswell tracts, and 6 amphibian and 10 reptile species were observed in Twin Lakes State Park. These included the taxa listed below. Thirteen species (8 amphibians, 5 reptiles) that were not recorded from Prince Edward County by Mitchell (1994) or Mitchell and Reay (1999) are denoted by an asterisk. Site codes for species observations are listed in brackets and refer to the locations plotted in Figures 2-5.

Amphibians

1. *Ambystoma maculatum* (Spotted salamander) - [B1]

One adult male was collected. This individual measured 90 mm SVL and 157 mm TL, and weighed 12 g. Larvae were also observed. This species was reported by Mitchell and Reay (1999) from one site along the Cumberland-Prince Edward county line (Farmville/Appomattox River area).

*2. *Ambystoma opacum* (Marbled salamander) - [B1]

One adult was observed under a log in deciduous woods adjacent to a pond. This individual measured 71 mm SVL and 122 mm TL, and weighed 20 g.

*3. *Desmognathus fuscus* (Northern dusky salamander) - [PE2-C]

One adult and one larva were collected from under streambed substrate.

4. *Eurycea cirrigera* (Southern two-lined salamander) - [PE2-C, PE2-F, PE3-A]

Two adults and two larvae were collected from under stream cobble substrate in perennial streams.

Results of 1999 VHS Spring Survey

*5. *Eurycea guttolineata* (Three-lined salamander) - [PE1-A]

One adult was observed on moss-covered stream bank.

6. *Notophthalmus viridescens viridescens* (Red-spotted newt) - [B1, PE1-C, TW2-B]

Five adults (3 females, 2 males) were observed. At least one of the females was gravid; this individual measured 46 mm SVL and 85 mm TL, and weighed 3 g. All adults were observed in ponds or lakes. One eft was found in a decaying log.

7. *Plethodon cylindraceus* (White-spotted slimy salamander) - [PE2-C]

One adult was collected under a hardwood log in close proximity to a perennial headwater stream.

*8. *Pseudotriton ruber* (Red salamander) - [PE3-A]

One larva was found in mud associated with a spring seep.

9. *Bufo americanus americanus* (Eastern American toad) - [TW1-B]

An adult male and female were observed in amplexus. Individuals were observed on a path within 10 m of the lake margin. A number of *Bufo* adults and tadpoles were not identified to species, and could have been either this or the following species.

*10. *Bufo fowleri* (Fowler's toad) - [B1, B2, PE2-A, TW1-A, TW1-B, TW1-D, TW2-B, TW2-D]

Fowler's toads were observed in a wide range of habitat types. Adults were observed in upland hardwoods, along streamside and lakeside paths, and under cover (boats, logs, etc.) along shorelines of ponds and lakes. Eleven specimens were enumerated through direct observation. Four individuals measured 55 mm (weight 21 g), 61 mm, 64 mm (weight 25 g), and 72 mm SVL, respectively.

11. *Acris crepitans crepitans* (Eastern cricket frog) - [B1, PE1-A, TW1-B, TW2-A, TW2-B, TW2-C, TW2-D]

Abundant calling males were often heard in full chorus. A total of 84 individuals were observed along stream bank edges, on gravel substrate above the waterline of a perennial stream, and along marshy lake margins.

*12. *Hyla chrysoscelis* (Cope's gray treefrog) - [PE2-C, PE2-D, SC-B, TW2-A]

Chorusing males called from trees along riparian corridors and woods adjacent to a lake. A number of gray treefrog (*Hyla chrysoscelis/versicolor*) choruses and calls were not identified to species.

*13. *Hyla versicolor* (Gray treefrog) - [B1, PE3-A, SC-B, TW2-A]

Chorusing males called from trees along riparian corridors and woods adjacent to ponds or lakes.

14. *Rana catesbeiana* (American bullfrog) - [TW1-A, TW1-B, TW2-B]

Eight adults and four tadpoles were observed along lake margins.

*15. *Rana clamitans melanota* (Northern green frog) - [B2, PE3-A, SC-B]

Three adults and four tadpoles were observed. Numerous males were heard calling along pond margins and riparian corridors.

16. *Rana palustris* (Pickerel frog) - [G-A, PE1-A, PE2-E, TW2-B, TW2-D]

All 16 adults observed were in association with stream bank habitat.

Reptiles

17. *Chelydra serpentina serpentina* (Eastern snapping turtle) - [B1, PE1-A]

Seven adults were collected in hoop nets set in a farm pond; all were weighed and measured (Table 1). Water depth at trap locations was 0.75 - 1.25 m.

Results of 1999 VHS Spring Survey

One hatchling was found dead in a perennial stream; it was also measured (Table 1). Mitchell (1994) reported that the maximum known size for the eastern snapping turtle in Virginia was 415 mm CL and 300 mm PL. This species was previously documented from one site along the Appomattox River on the Cumberland-Prince Edward county line (Mitchell, 1994; Mitchell and Reay, 1999).

Table 1. Length and weight of eight eastern snapping turtles observed during the survey.

<u>CL (mm)</u>	<u>PL (mm)</u>	<u>Weight(g)</u>
18	30	-
62	84	130
124	160	1200
124	169	1200
166	245	>2000
180	255	>2000
193	269	350
247	342	-

18. *Chrysemys picta picta* (Eastern painted turtle) - [B1, TW1-D, TW2-C]

Eleven adults and five juveniles were observed. Nine specimens were measured, four of which were also weighed (Table 2).

Table 2. Length and weight of nine eastern painted turtles observed during the survey.

<u>Age/sex</u>	<u>CL (mm)</u>	<u>PL (mm)</u>	<u>Weight(g)</u>
Juvenile	25	30	-
Juvenile	30	35	-
Juvenile	30	35	-
Juvenile	60	70	-
Adult male	112	124	220
Adult	122	134	330
Adult	130	133	-
Adult	141	156	490
Adult female	145	152	450

*19. *Kinosternon subrubrum subrubrum* (Eastern mud turtle) - [B1, TW1-B]

Two adults were collected; one measured 66 mm TL, the other 72 mm CL and 73 mm PL. These individuals were observed in pond edge habitat.

*20. *Pseudemys concinna* (River cooter) - [TW2-C]

One adult was observed basking on a log in a lake cove.

*21. *Sternotherus odoratus* (Eastern musk turtle) - [B1]

One adult (64 mm CL, 90 mm PL, 130 g) was observed. Two shells were collected, one of which measured 60 mm CL and 80 mm PL.

22. *Terrapene carolina carolina* (Eastern box turtle) - [B2, PE1-B, PE2-A, PE3-A, TW1-A, TW2-B]

Eight individuals were observed, at least seven of which were males. Six specimens were measured (Table 3). Two remnant shells were found. All individuals were found in hardwoods or mixed oak-pine woods. Where habitat was determined, two individuals were found under logs, three were on trail's edge in woods, two were in upland habitat, and one specimen was found along a stream. Age of three individuals was determined as 21, 23, and 26 years, respectively.

Table 3. Length and weight of six eastern box turtles observed during the survey.

<u>CL (mm)</u>	<u>PL (mm)</u>	<u>Weight (g)</u>
-	106	-
-	109	-
107	126	335
-	128	-
-	133	-
124	136	410

Results of 1999 VHS Spring Survey

23. *Eumeces fasciatus* (Five-lined skink) - [B1, B2, G-A, PE1-A, PE2-D, SC-A, SC-B, TW1-B, TW2-B, TW2-D, TW2-E]

Fifteen adults were observed, including at least five males and one female. Two juveniles were sampled. Six individuals were measured, three of which were also weighed (Table 4). Mitchell (1994) reported that the maximum known size for this species in Virginia was 77 mm SVL and 188 mm TL.

Table 4. Length and weight of six five-lined skinks observed during the survey.

<u>Age/sex</u>	<u>SVL (mm)</u>	<u>TL (mm)</u>	<u>Weight (g)</u>
Juvenile	-	100	-
Juvenile	48	102	2
Adult	76	170	-
Adult male	78	-	10
Adult male	78	170	11
Adult female	80	170	-

24. *Sceloporus undulatus hyacinthinus* (Northern fence-lizard) - [PE1-B, PE2-A, TW2-A, TW2-D, TW2-E]

Eight adults and one juvenile were observed on and in woodpiles, and on pine and oak trees in forested uplands. Two individuals were measured: 72 mm SVL and 162 mm TL, and 50 mm SVL and 120 mm TL, respectively.

25. *Scincella lateralis* (Little brown skink) - [PE1-B]

Two adults were observed on logs.

26. *Agkistrodon contortrix mokasen* (Northern copperhead) - [B1]

One juvenile was collected.

27. *Carphophis amoenus amoenus* (Eastern wormsneke) - [B1, PE2-C, TW2-D]

Four wormsnekes were collected. Two specimens measured 189 mm SVL and

235 mm TL and 211 mm SVL and 243 mm TL, respectively. Another measured 180 mm TL and weighed 3.5 g. All individuals observed were in or under downed and decaying logs; one individual was found in a rotting pine log.

*28. *Coluber constrictor constrictor* (Northern black racer) - [PE2-A]

One female (720 mm TL, 48 g) was observed retreating up a tree along a wooded road edge.

29. *Diadophis punctatus* (Ring-necked snake) - [SC-A]

One intergrade with few spots on the venter, and measuring 29 mm SVL, was seen under a log.

30. *Elaphe obsoleta obsoleta* (Black ratsnake) - [PE2-D]

One adult was observed in a barn.

31. *Lampropeltis calligaster rhombomaculata* (Mole kingsnake) - [PE2-B]

An adult female (750 mm TL) was observed crossing a road in woodlands.

32. *Lampropeltis getula getula* (Eastern kingsnake) - [B2]

One adult was collected in emergent shoreline vegetation. This individual measured 520 mm SVL and 560 mm TL, and weighed 80 g.

33. *Nerodia sipedon sipedon* (Northern watersnake) - [B1, B2, PE3-A, TW1-B, TW1-E, TW2-B]

Five adults and three juveniles were observed, generally in association with the marshy margins of ponds or lakes. One juvenile was observed under a log, and one adult was found in a perennial stream. One adult regurgitated a live bullfrog (*Rana catesbeiana*) tadpole. Of the adults examined, one was a male (505 mm SVL, 670 mm TL, 180 g) and two were females, one of which measured 600 mm SVL and 790 mm TL and weighed 290 g.

Results of 1999 VHS Spring Survey

34. *Opheodrys aestivus* (Rough greensnake) - [B2]

Three adults were observed on vegetation over water on pond edges. Lengths and weights were recorded (Table 5).

Table 5. Length and weight of three adult rough greensnakes observed during the survey.

<u>SVL (mm)</u>	<u>TL (mm)</u>	<u>Weight (g)</u>
400	632	27
420	660	40
510	800	50

35. *Regina septemvittata* (Queen snake) - [TW2-A]

One individual was collected, measuring 23 cm SVL and 32 cm TL.

*36. *Thamnophis sauritus sauritus* (Eastern ribbonsnake) - [B2, TW2-A]

Three individuals (one dead) were found along marshy borders. An adult female measured 431 mm SVL and 660 mm TL, and weighed 29 g.

37. *Thamnophis sirtalis sirtalis* (Eastern gartersnake) - [PE2-A]

One female (885 mm TL) was observed along a wooded road edge.

Discussion

The range of habitats found on the Boswell tracts, Prince Edward-Gallion State Forest, Twin Lakes State Park, and Sailor's Creek Historical State Park is representative of the southern Piedmont today, being determined by modern land use practices. Hardwood and mixed oak-pine uplands, forested wetlands and wooded riparian corridors, marshy borders along ponds and lakes, perennial streams, forest-field edges, abandoned farmland, and pasture/grassland habitats all occur in the region. Local habitat disruption occurs on a frequent basis where forestry or agricultural management practices are in place.

While eight species of salamanders were observed during the survey the number of individuals per species was low. Only one adult of each of two ambystomid species and one plethodontid individual were observed during the survey. Given the amount of sampling effort expended on stream habitats, stream-dwelling salamanders were poorly represented in the survey. The scale and intensity of forestry management practices and other land-clearing activities in this area over time may have impacted salamander populations. Disruption or destruction of habitat results in reduced populations of salamanders, and can lead to local extinction (LaClaire, 1997). Populations of salamanders are particularly sensitive to impacts from logging activities. Re-colonization after a local extinction may not occur if habitat is unsuitable between extant populations and the impacted area. Further survey work would determine the status of salamander populations occurring on Prince Edward-Gallion State Forest, Twin Lakes State Park, and Sailor's Creek Historical State Park.

One salamander, the eastern red-spotted newt, was abundant at a number of sites. Unlike many salamander species, red-spotted newts can inhabit ponds containing fish because of toxins in their skin. Many of the ponds in the survey area had largemouth bass (*Micropterus salmoides*) and sunfish (*Lepomis* sp.) that would prey upon salamanders other than red-spotted newts.

Whereas populations of amphibians are impacted by habitat alteration, with slow or no re-colonization, reptiles generally can re-colonize disturbed lands once habitat association parameters are met. Thus, the diversity of habitat occurring on the survey sites is reflected in reptile species richness (21 species) observed during this survey. The species-habitat associations of reptiles surveyed reflect this habitat range. Species surveyed included the eastern painted turtle, associated with lentic aquatic habitats; the northern watersnake, associated exclusively with stream, pond, and lake margin habitats; the ring-necked snake, typically occurring in large tracts of deciduous forest; and the five-lined skink, associated with forests having large decaying logs and trees (Mitchell, 1994).

Incorporation of reptiles and amphibians in future management plans for Prince Edward-Gallion State Forest, Twin Lakes State Park, or Sailor's Creek Historical State Park is the primary requirement for maintaining, and increasing, populations of these faunal groups on these state-managed lands.

Results of 1999 VHS Spring Survey

Data from this survey, and future surveys for reptiles and amphibians will provide the information required for inclusion of herpetofauna in future management plans.

Lands within Prince Edward-Gallion State Forest have been intensively managed for forestry practices since the mid-1930s. According to the Virginia Department of Forestry, Prince Edward-Gallion State Forest is currently managed "to ensure a sustained yield of timber for the operation and maintenance of the resource and stability of the local economy." A secondary management goal for this and other state forests is to provide "multiple benefits," including, hunting, fishing, recreation, water quality, and others. Our survey efforts on the Gallion tract of Prince Edward-Gallion State Forest indicate that it is not managed for non-game wildlife such as reptiles and amphibians. In fact, our survey found it to be almost devoid of herpetofaunal life. In three person-hours of effort, only one individual amphibian and one reptile were found. The lack of woody debris and leaf litter on the forest floor, the replacement of hardwoods with pines, and the lack of a wide forest buffer along streams indicate forestry managers should examine the forestry practices in place on this tract.

While a representative amount of survey effort was expended on Sailor's Creek Historical State Park, only two amphibian and two reptile species were found during the survey. The variety of habitats found on the property would indicate a more diverse herpetofauna. Further survey work is needed to elucidate reptile and amphibian species occurrence on Sailor's Creek Historical State Park.

Although nearly 20 five-lined skinks were observed, with many identified to species via scale counts, no southeastern five-lined skinks were observed during the survey. It would appear the relative abundance of southeastern five-lined skinks is very low in this portion of the southern Piedmont or this species may not occur in the vicinity. Further survey work is needed to determine the distribution of the southeastern five-lined skink in the southern Piedmont.

The southeastern crowned snake was not observed during the survey. Mitchell (1994) indicates that this species occurs in xeric pine and oak-pine forests with decaying logs. Dry oak-pine habitat is prevalent on the areas

surveyed, and further survey work is needed to determine the status of this snake in this area. The best method to capture this rare snake is by using drift fences and pitfall traps (Semlitsch et al., 1981).

The state parks and state forest system are important public assets, and provide an opportunity to manage the wildlife resources of the Commonwealth. Incorporating reptiles and amphibians into future management plans will provide the mechanism to conserve and improve populations of Virginia's diverse herpetofauna. Nowhere is this protection more important than the southern Piedmont, as habitat disruption is widespread throughout the region. It is hoped that information from this survey will be used by resource managers to incorporate these important components of the wildlife resources occurring on Prince Edward-Gallion State Forest, Twin Lakes State Park, and Sailor's Creek Historical State Park into appropriate management plans.

Acknowledgments

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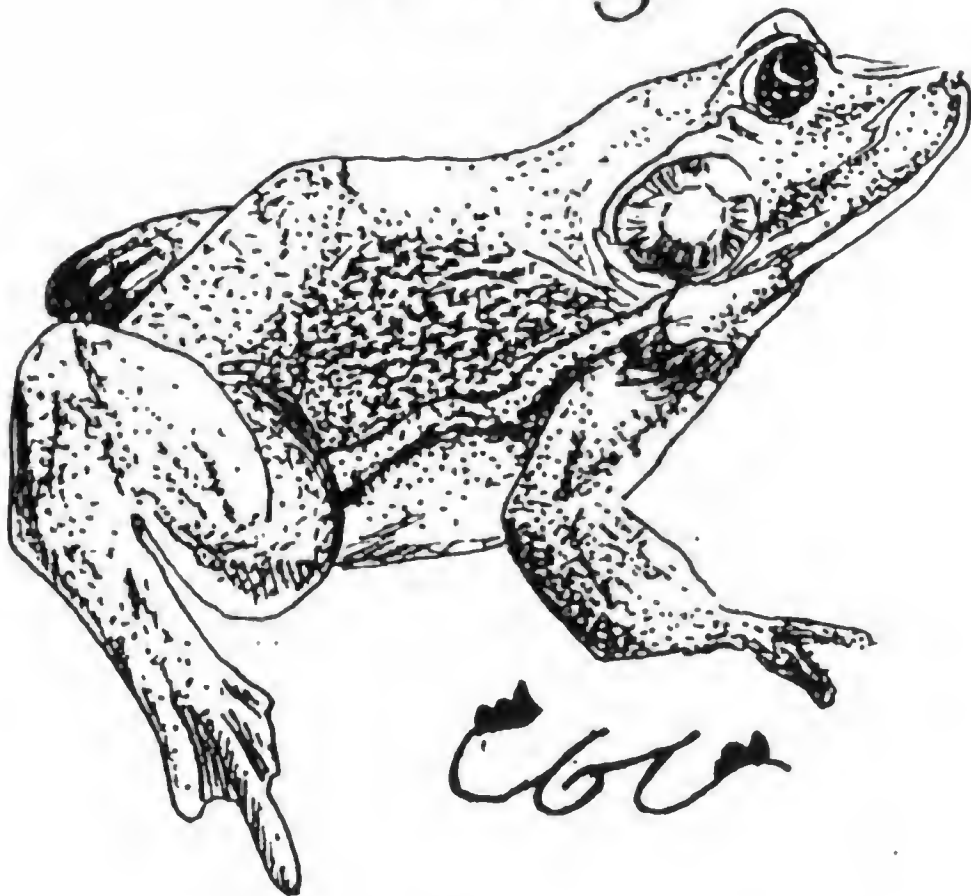
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Bullfrog



Chris Chewning
2/15/00

American Bullfrog (*Rana catesbeiana*). Drawing by Chris Chewning, 7th grade student at Pocahontas Middle School, Powhatan, Virginia.

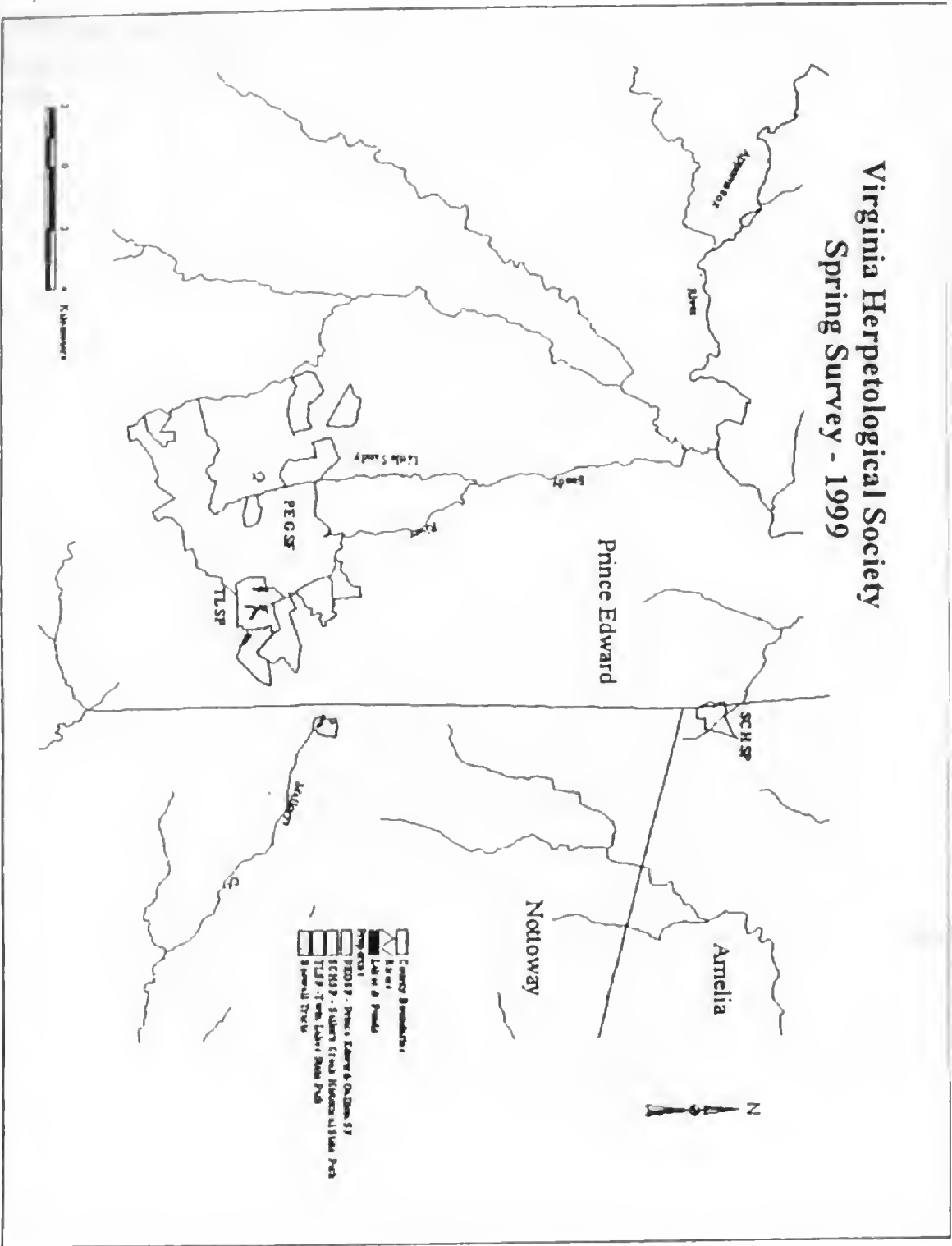


Figure 1. Land management units surveyed during the 1999 Virginia Herpetological Society Spring Survey.

Results of 1999 VHS Spring Survey

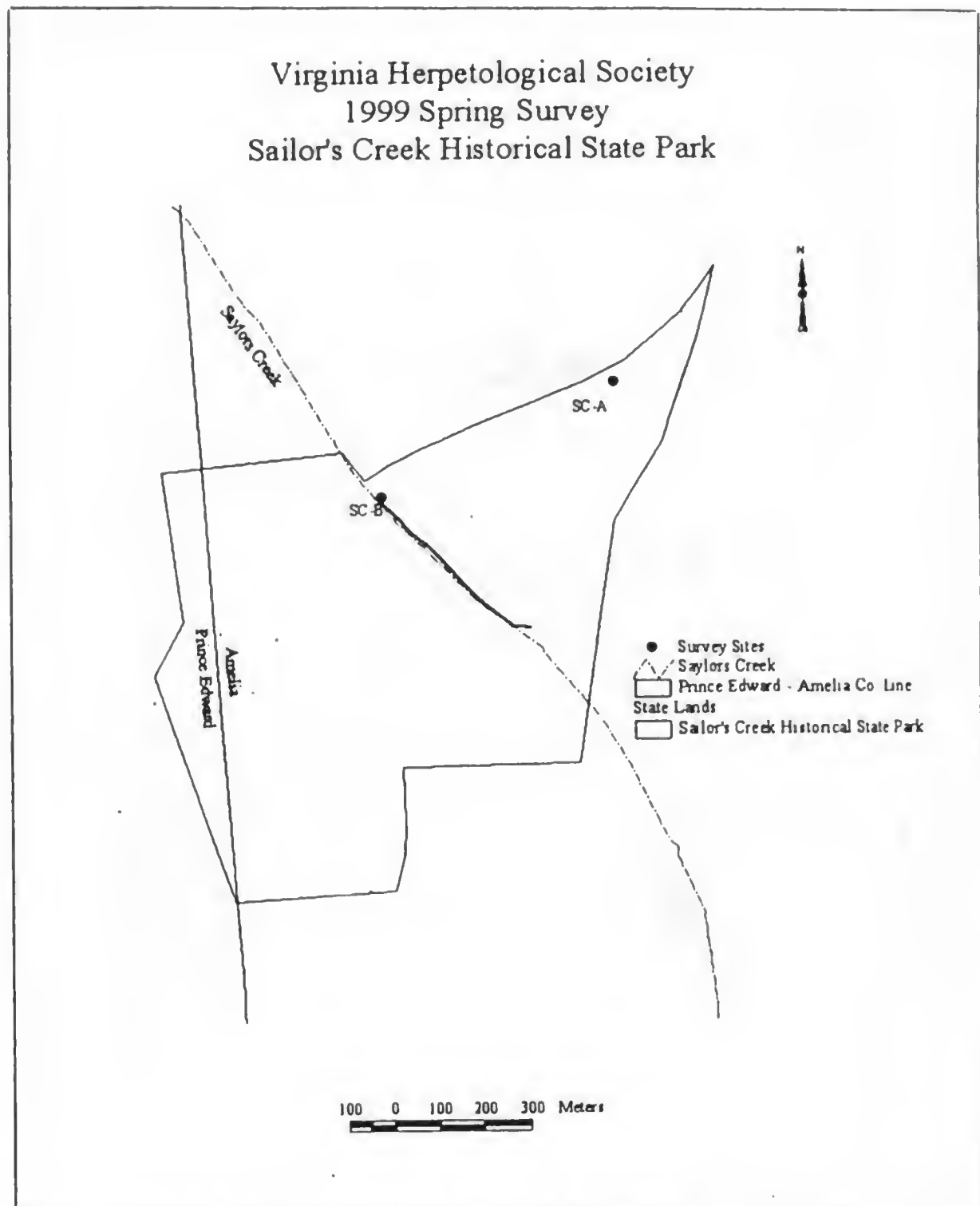
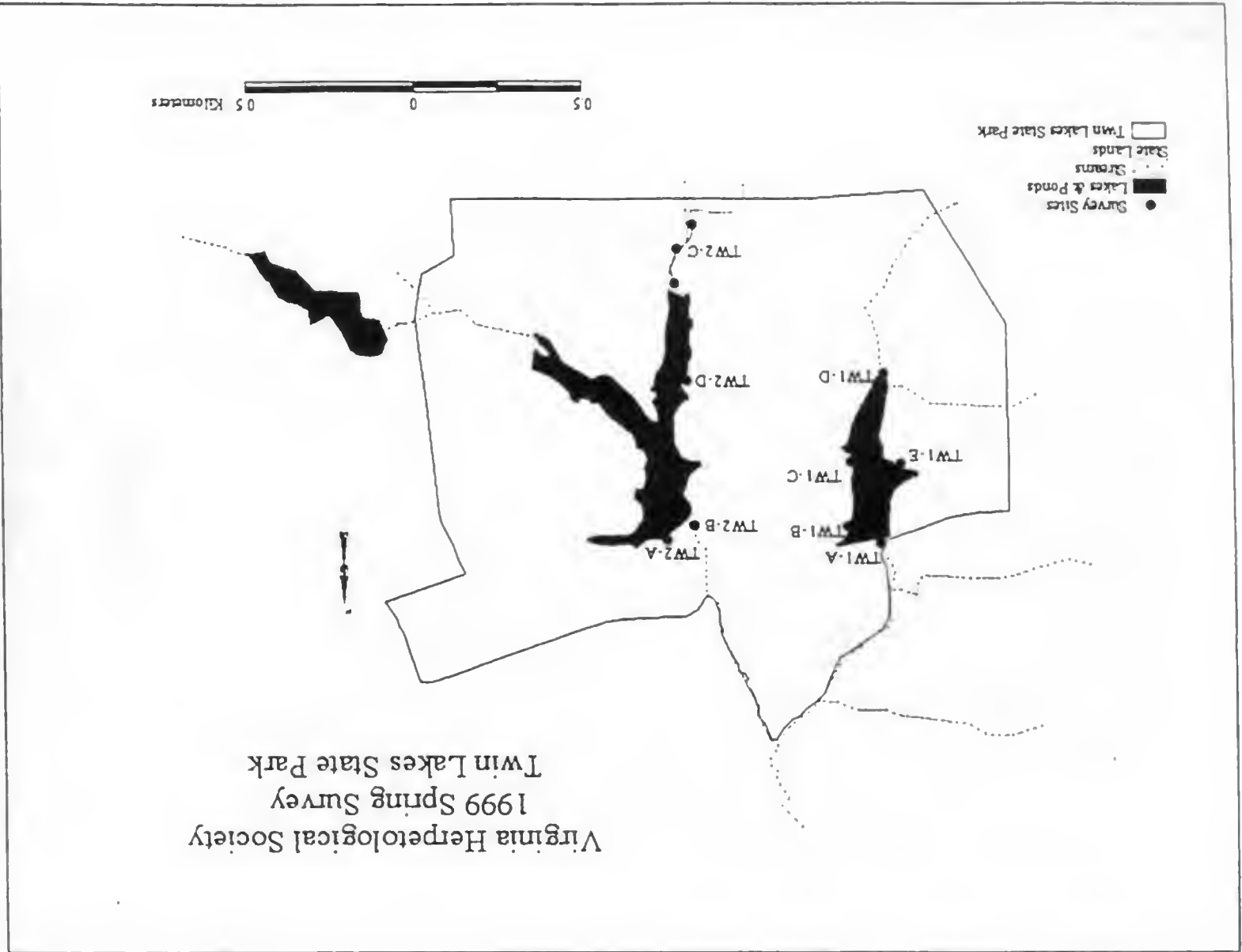


Figure 2. Survey sites on Sailor's Creek Historical State Park.

Figure 3. Survey sites on Twin Lakes State Park.



Virginia Herpetological Society 1999 Survey
Prince Edward-Gallion State Forest

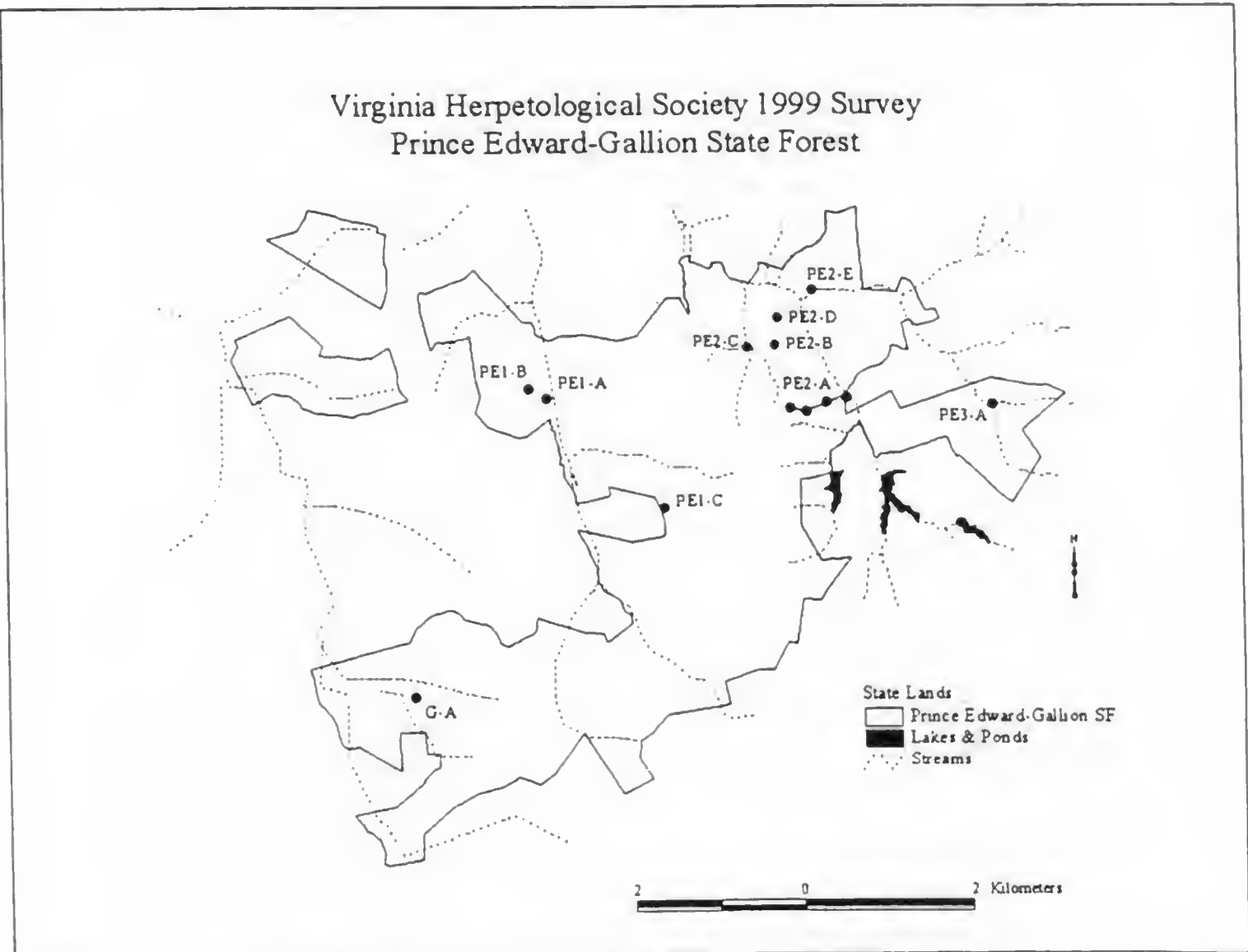


Figure 4. Survey locations on Prince Edward-Gallion State Forest.

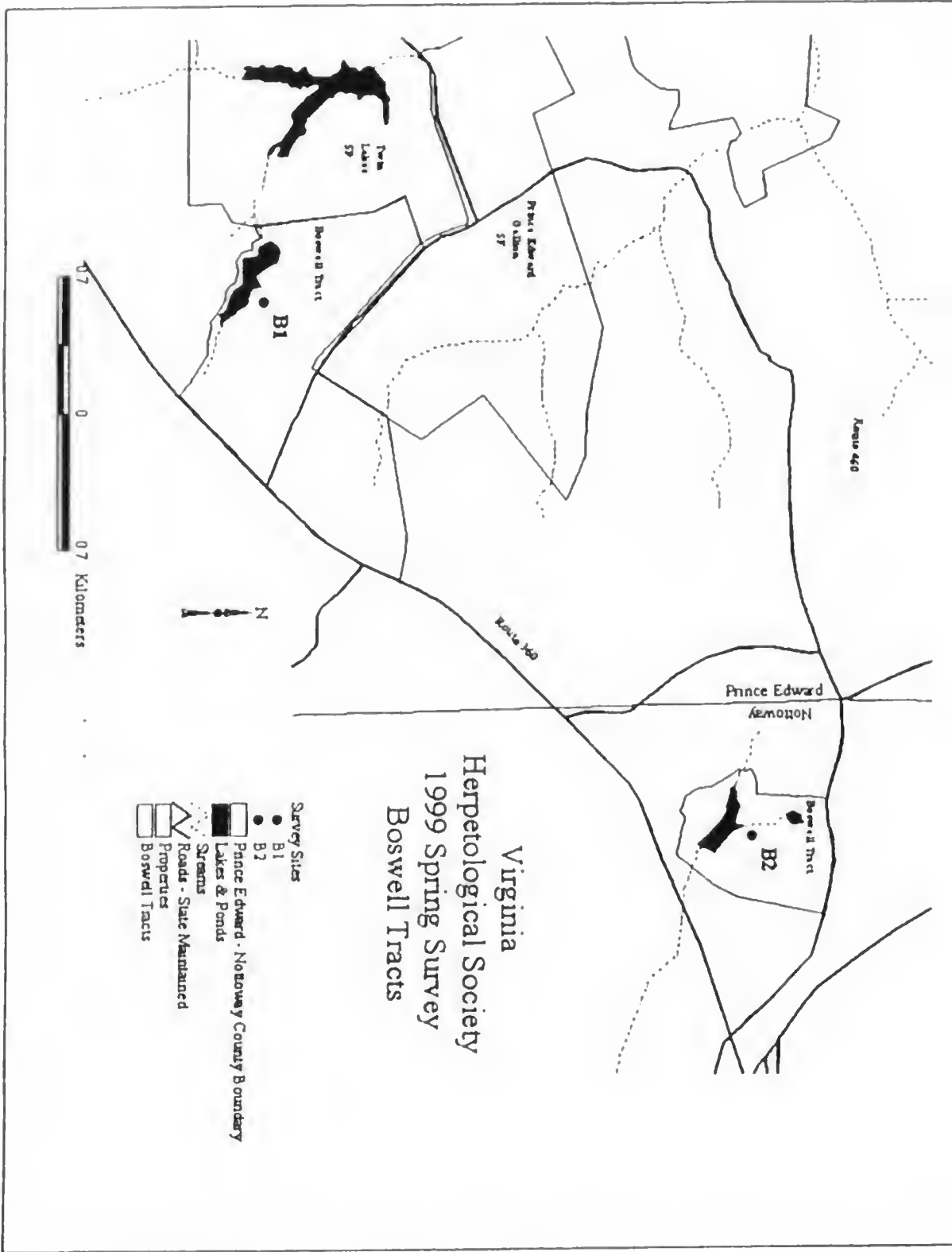


Figure 5. Survey locations on the Boswell tracts.

Copperheads on the York-James Peninsula, Virginia

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Introduction

The copperhead (*Agkistrodon contortrix*) is widely distributed in Virginia (Mitchell, 1994; Mitchell and Reay, 1999). However, there are small areas of the state from which copperheads have never been conclusively documented in the literature. These include the barrier islands (Conant et al., 1990; Mitchell and Anderson, 1994) and the outer Northern Neck, *i.e.*, Northumberland and Lancaster counties (Tobey, 1985; Mitchell, 1994; Mitchell and Reay, 1999). Of particular interest to us is the supposed absence of copperheads from the lower Coastal Plain terrace of the York-James Peninsula (Wood, 1954; Goodwin and Wood, 1956; Mitchell, 1994; Mitchell and Reay, 1999). We believe they do exist there in small and apparently very local colonies as discussed in this paper.

Wood (1954) stated that the only poisonous snakes on the eastern end of the York-James Peninsula (Hampton, Newport News and formerly Warwick City and Warwick County) were canebrake rattlesnakes (*Crotalus horridus atricaudatus*). Cottonmouths (*Agkistrodon piscivorus*) were not reported from the Peninsula (Newport News-Hampton area) until a decade later (Witt, 1964). Despite extensive field work, Goodwin and Wood (1956) failed to document copperheads in a 130 mi² belt of the Virginia Coastal Plain between Grove (York County) and the Chesapeake Bay and remarked that they were puzzled by its apparent absence in this area. Our recent investigations indicate that copperheads are found on the Peninsula where they should be considered extremely local. Although more field work is needed to document its true peninsular distribution, below are new records for copperheads in Newport News, Hampton, and the counties of James City and York that we consider reliable.

City of Newport News

The only specific published locality for copperheads from the area that now includes the City of Newport News is from Warwick (City), 2 miles north

of Lee Hall on Route 174 near Route 238 (Wood, 1954; Goodwin and Wood, 1956). This locality lies within the U. S. Naval Weapons Station on Lebanon Church Road (formerly State Route 174). We believe the following recent reports of copperheads are also reliable.

On 9 September 1994, Newport News Park (NNP) ranger Christopher Wirt was dispatched to the Wendwood Square Apartments near the intersection of Nettles Lane and Oyster Point Road to investigate a citizen complaint of a copperhead on the property. A 3-foot (0.9 m) copperhead was identified despite its having been almost completely destroyed by blows from a hoe.

On 23 June 1995, NNP ranger Christopher Mueller verified a copperhead captured at the Criston Apartments at the intersection of Criston and Hancock Drives. The snake was released unharmed onto Newport News Waterworks property. The capture site was formerly the Yoder Dairy, which operated until 1995 when the land was developed as the Yoder Plaza Shopping Center. This property is noteworthy because it was the last, large undeveloped tract in the Criston section of Newport News.

On 9 August 1996, NNP ranger Steve Holliday confirmed the identity of a copperhead at Mary Immaculate Hospital that bit a man at his home on Misty Point Lane. This residence is located about 0.5 miles (0.8 km) east of Lee Hall Elementary School on the waterfront of Skiffes Creek.

On 10 October 1996, a juvenile copperhead was discovered by Robert Wright in a hardwood forest adjacent to Newmarket Creek, within an undeveloped section of the Courtney Trace subdivision. The snake was found in a large brushpile located just north of the intersection of Diane Trace and Gunby Road. The copperhead was captured, measured (26 cm total length), photographed, and released on site. A copy of the photograph has been deposited in the VHS archives. This specimen had the characteristic southeastern pinkish tinge and 15 very narrow (3 and 4 scales wide) but unbroken brown middorsal crossbands (Mitchell, 1994). This is the only record of copperheads from the lower Peninsula that is supported by a photograph or extant voucher specimen.

None of the various NNP rangers that we queried could confirm the presence of copperheads in the area despite its inclusion on the park's

Copperheads on York-James Peninsula

wildlife checklist (Newport News Department of Recreation and Parks, 1989).

City of Hampton

Copperheads have not been reported previously from the City of Hampton (Mitchell, 1994; Mitchell and Reay, 1999), but we have recently learned of unverified reports from the headwaters of Newmarket Creek. In September 1993, Jim Spielberg, course marshal at The Hamptons Golf Club, encountered a 2.5-foot (0.8 m) copperhead at the edge of a trail around Chisman Lake (now Sandy Bottom Nature Park) near the intersection of Interstate 64 and Big Bethel Road. Sandy Bottom Park manager Chris Hickman records the presence of copperheads in the park via a recent field report made by a ranger. Previously, URS Consultants (1995) reported copperheads from edge habitat at the park.

Mrs. George W. (Vivian) Vest, a retired schoolteacher, who correctly identified a copperhead in a photographic collage depicting the northern water snake, milksnake, corn snake, and cottonmouth, clearly remembers her deceased husband having repeated encounters with both copperheads and rattlesnakes in the swampy woods west of their residence in the early and mid-1960s. The property, now completely consumed for use as the Big Bethel Landfill and Williams Brothers Pit, had extensive hardwood and pine forest cover up until about 1965 (photorevised Newport News North USGS Quadrangle Map). Further habitat destruction occurred in May 1997, when mature remnant swampy hardwoods on a 57 acre (23 ha) tract were developed as the Hampton Roads Center West Office Complex. This site was contiguous to verified habitat for the canebrake rattlesnake (Goodwin and Wood 1956).

James City County

There are two published locality records for copperheads in lower James City County: 4.5 miles (7.2 km) west and 4 miles (6.4 km) north of Lee Hall, respectively (Wood, 1954; Goodwin and Wood, 1956). The latter locality lies just south of the York County border.

We discovered another record in the archives at the Virginia Living

Museum (VLM). A copperhead was captured in the Indigo Park subdivision on 26 September 1969. This location is on Route 5, about 2.25 miles (3.6 km) west of its intersection with Ironbound Road (County Route 615). The specimen, which no longer exists, was preserved and placed in the collection of the Peninsula Junior Nature Museum and Planetarium (PJNMP accession number 69-129), the predecessor of the VLM. Note that this record is not plotted on the accompanying map. We infer from the other Williamsburg localities published in Goodwin and Wood (1956) that copperheads may be more widely distributed in James City County than York County.

York County

Witt (1964) reported copperheads from York County and Engeling (1969a, b) later documented the species from the Naval Weapons Station at Yorktown, based on a specimen (no longer extant) captured in 1967 (PJNMP accession number 69-54a). Copperheads were not found on the Naval Weapons Station or Cheatham Annex during recent surveys conducted by the Virginia Division of Natural Heritage (VDCR, 1990; Buhlmann and Ludwig, 1992), nor are they reported as a member of the fauna of that military installation (NPS, 1991; 1993).

Recent inquiries with local Peninsula contacts have resulted in a few reports of copperheads in York County that we consider reliable. Walter Sweat, forestry supervisor with Newport News Waterworks, reports the July 1997 discovery of a 3-foot (0.9 m) copperhead on the headwaters of Whiteman Swamp in northern York County while maintenance personnel were clearing brush at the terminus of Lodge Road. Mark Phinney, a hunter and outdoorsman of local repute, reports his sighting of a road-killed copperhead at the I-64 overpass on Penniman Road (County Route 641) in September 1997. This site is approximately 1200 feet (365 m) northeast of Sweat's observation. Phinney also reports a May 1997 sighting of a copperhead near the eastern shore of Duncans Pond in the Busch Industrial Park (1500 block of Penniman Road). This totals three reports within a 0.5 mile (0.8 km) radius.

Copperheads are not reported from Colonial National Historical Park (CNHP) (NPS, 1993; Hobson, 1998; C. Rafkind, pers. comm.). However,

Copperheads on York-James Peninsula

it is noteworthy that a specimen was evidently collected along the Colonial Parkway, 9 miles (14.5 km) west of Yorktown (Wood, 1954; Goodwin and Wood, 1956). This places the locality at or very near the Parkway crossing at Jones Mill Pond, an area known to CNHP maintenance personnel as "copperhead country" (S. Brooks, pers. comm.). Based on our investigations, it appears that the north-central region of York County harbors a local population of copperheads.

Discussion

The information presented herein suggests that copperheads occur locally on the York-James Peninsula of Virginia in Newport News and Hampton within the headwaters of Newmarket Creek, and upper portions of James City and York counties. Copperheads may inhabit other areas of the Peninsula in small enclaves where large-scale habitat disturbance has not historically occurred and where there is a relatively balanced community of closed, hardwood forests supporting an abundant mammalian food source. Our field observations indicate these mast-producing forests are comprised primarily of American beech (*Fagus grandifolia*) and chiefly cherrybark, white, swamp red, and white oaks (*Quercus* spp.).

It is possible that recent habitat disturbances have caused copperheads to disperse into previously undetected or unreported localities, such as that reported here on the southeastern outskirts of Williamsburg in York County as well as lands surrounding the Big Bethel Landfill in Hampton. Within York County, habitat destruction of hardwood forests is occurring at an accelerated pace. The land clearing for two new projects in one area (Carver Gardens) totals approximately 400 acres (161 ha). Disturbance of this magnitude has the potential of extirpating a small, local population of copperheads, since the reported home range (for males in Kansas) is 24.2 acres (9.8 ha) (Fitch, 1958). Petersen (1994) reports that their seasonal movements in southeastern Virginia reflect patterns of potential prey availability. It has been noted that the onset of forest destruction of canebrake rattlesnake habitat on the York-James Peninsula appears to be related to the subsequent discovery of individuals fleeing the perturbation (Mitchell and Schwab, 1991).

Further field work is needed to better document the remaining potential habitat for the copperhead on the Peninsula. All reliable reports of copperheads from there and surrounding Coastal Plain areas should be reported in the literature. Currently, there are no preserved specimens of the copperhead from the lower Peninsula, despite good evidence that several formerly existed. All field workers, including park officials, foresters, utility linemen, educators, and naturalists are encouraged to legally salvage any copperheads from this area, and report their findings to the authors, the VHS, or VDGIF officials so that specimens can be preserved and deposited in a curated collection.

Acknowledgments

In addition to contact persons specifically cited in this text, the authors express their gratitude to various individuals who assisted in gathering information and reports for our use. We thank Newport News Park rangers Jerry Bocek, John Gamache, Will Henderson, and especially Roxanne Rouse for their help in tracking down unpublished police report information and other data. We thank Chris Hickman at Sandy Bottom Nature Park for his records investigation. We also thank Joe Mitchell and Mike Hayslett for independently verifying our photograph of the juvenile copperhead cited in the text. We sincerely appreciate bibliographic assistance provided by Ms. Pat Christianbury, Research Department, Virginia Museum of Natural History in Martinsville. We also extend our gratitude to Ms. Jody Ullmann, collections manager at the Virginia Living Museum, for helping us uncover some old specimen documentation. Finally, we thank five anonymous VHS members for critically reviewing and suggesting improvements to a previous version of the manuscript.

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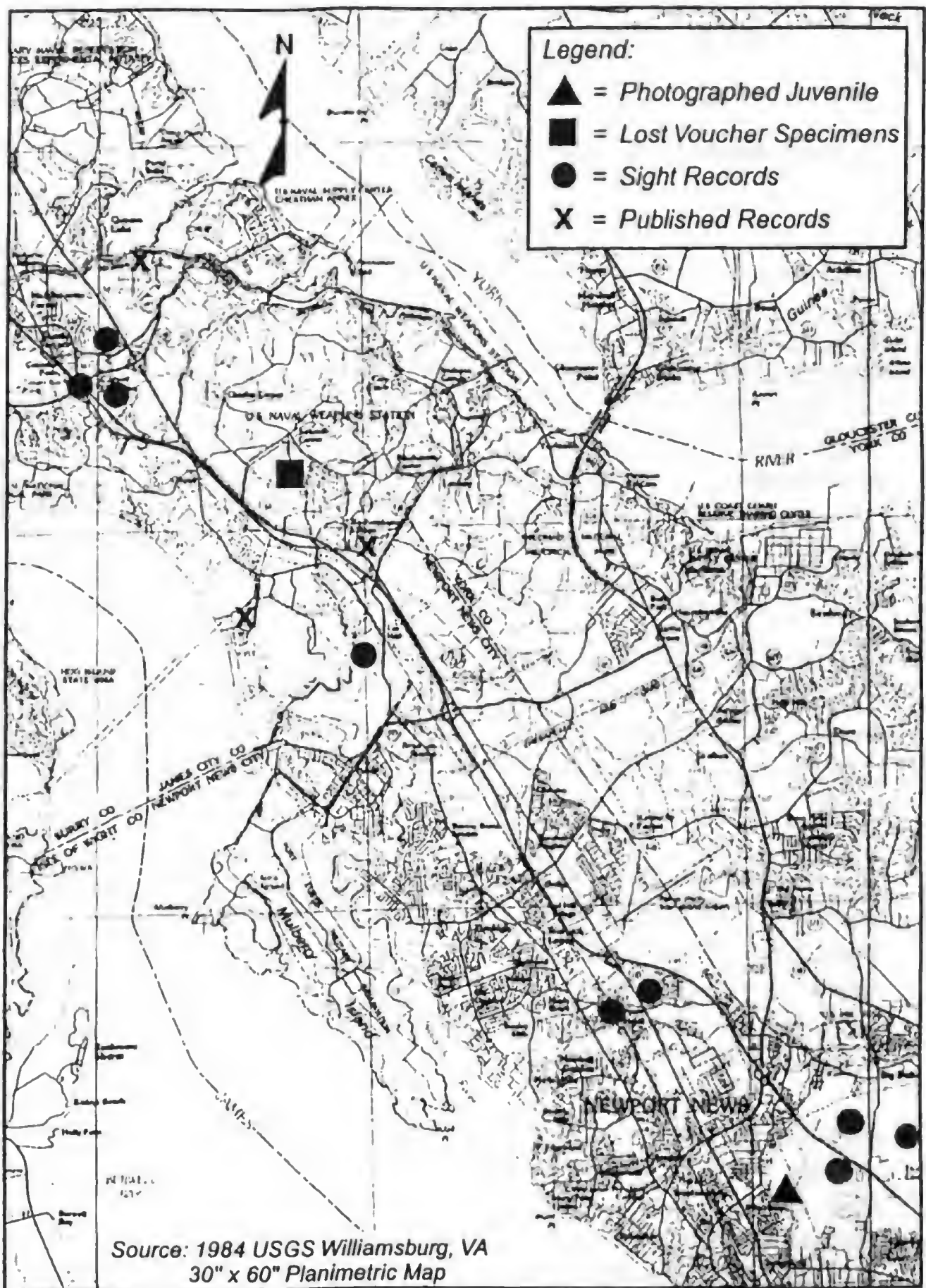


Figure 1. Copperhead Records on the York-James Peninsula, Virginia

**Syntopic Occurrence of *Eurycea lucifuga* (Cave Salamander),
E. longicauda longicauda (Long-tailed Salamander),
and *E. guttolineata* (Three-lined Salamander)
in the Piedmont of Virginia**

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In an abandoned mine shaft near Riverville, Amherst County, Virginia, we have found three species of *Eurycea* during four recent surveys, including two cave salamanders (*E. lucifuga*), three long-tailed salamanders (*E. longicauda longicauda*) and four, three-lined salamanders (*E. guttolineata*). These findings represent new county records as well as range extensions for *E. lucifuga* and *E. l. longicauda* of approximately 60 km (Mitchell and Reay, 1999). This new location is in the Piedmont physiographic region whereas all other Virginia locations for these two species are from the Ridge and Valley and Blue Ridge Mountain physiographic regions (Mitchell and Reay, 1999). For the long-tailed salamander, this locality in the Piedmont extends its distribution into an area typically occupied by the three-lined salamander and is the first known syntopic occurrence of these two species in Virginia (Mitchell and Reay, 1999).

The mine is a horizontal shaft about 100 m long, 3 m high and 3 m wide, with two short side shafts. Water often drips from the ceiling and stalactites are developing. There is a small, spring-fed pool in the mine about 0.5 m deep. Larvae of *E. lucifuga* and *E. longicauda* complex (*E. longicauda* and *E. guttolineata*; Petranksa, 1998) were first seen in the pool in January, 2000. Adult salamanders have been found throughout the mine.

How the cave and long-tailed salamanders dispersed to this location is unclear. The mine is approximately 100 m from the James River. During high waters some animals might have been washed downstream and fortuitously been deposited in the vicinity of the mine. Land dispersal is also possible since both species are not restricted to caves (Petranksa, 1998). Areas between the mine and the Ridge and Valley and Blue Ridge Mountain physiographic regions should be surveyed to determine if the salamanders in the mine represent disjunct populations or whether these

Eurycea in Virginia Piedmont

two species are more broadly distributed in the Piedmont.

In addition to the intriguing biogeographic aspects of the site, there is the potential for hybridization between *E. guttolineata* and *E. l. longicauda*, which are considered by some biologists to be subspecies (Conant and Collins, 1998), whereas others (Carlin, 1997; Petranka, 1998) consider them full species. Intermediates have been observed in contact zones in Alabama, Georgia, Mississippi and Tennessee (Petranka, 1998). We examined in the field two specimens with color patterns intermediate between *E. guttolineata* and *E. l. longicauda* and assigned one individual to each of these species using Carlin's (1997) criterion of the longest mid-dorsal stripe length relative to the snout-vent length. Electrophoretic analysis should be done on the three-lined and long-tailed salamanders to determine whether hybridization is occurring in this potentially disjunct locality for the latter species.

Voucher specimens of one long-tailed and one cave salamander were deposited in the Virginia Museum of Natural History (VMNH 9384 and VMNH 9383, respectively). Additional work on the population dynamics of the salamanders found in this mine is being funded in part by the Virginia Department of Game and Inland Fisheries.

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The Wood Turtle (*Clemmys insculpta*) in Eastern Fairfax County, Virginia

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The wood turtle (*Clemmys insculpta*) reaches the southern end of its range in North America in northern Virginia (Ernst et al., 1994). There are several recent and historical localities known for Fairfax County westward through the counties of Loudoun, Clarke, Frederick, Warren, Shenandoah, and Page to the middle of Rockingham County (Buhlmann and Mitchell, 1989; Mitchell, 1994; Mitchell and Reay, 1999). The species is listed officially as Threatened in the Commonwealth by the Virginia Department of Game and Inland Fisheries due to extensive habitat loss and threat of over-collection for the illegal pet trade (Ernst and McBreen, 1991; Mitchell and Reay, 1999). An examination of historical and recent museum specimens support the observation that several previously known populations have become extirpated this century (op. cit.). However, most of these observations are based on museum specimen data and not on recent and extensive surveys.

The historical and modern status of this species in Fairfax County has yet to be documented due largely to the protected status of wood turtles in the state and because biologists are unwilling to provide precise locality data. Ernst and McBreen (1991) indicated that about one-third of the known localities in Fairfax County have been extirpated. This species was formerly known from Arlington County, as well as from several locations throughout the northern half of Fairfax County (Tobey, 1985). Ernst et al. (1997) noted that wood turtles are known from Huntley Meadows Park, Fairfax County (not Alexandria, as noted in the paper), a location upstream from Fort Belvoir. J. C. Mitchell also verified a "sighting" at Great Falls Park in Fairfax County by National Park Service employee Susan Bloomfield in 1994. Another record from

Wood Turtle in Fairfax County

Fairfax County without specific locality data occurs in the Virginia Natural Heritage Program database (C. Hobson, pers. comm.).

Ernst et al. (1997) reported an observation of a male wood turtle on 28 May 1988 from the Jackson Abbott Wetland Refuge portion of Fort Belvoir Military Reservation (U.S. Army) and several other unconfirmed reports on the base. There are no known specimens to voucher these observations nor are there published photographs. These authors also noted that there was insufficient evidence to determine if a viable population exists on the military base. No *C. insculpta* were verified from Fort Belvoir for more than a decade following this initial observation despite repeated herpetological surveys by Fort Belvoir personnel, faculty and students of George Mason University, zoologists with the Virginia Department of Conservation and Recreation's Division of Natural Heritage (Hobson, 1996, 1997), and field work associated with an amphibian monitoring program (Mitchell, 1998).

On 27 May 1999, the junior author found an adult male *C. insculpta* on Fort Belvoir in a creek bed (the exact location is not provided due to its protected status). The turtle (Figure 1) was an old individual as evidenced by a smooth and extensively pitted carapace. The layered, sculptured carapacial scutes, typical of this species, were nowhere evident. There was a single pit in the left pectoral scute of the plastron, as well as a pit that completely perforated the plastron on the edge of the right anal scute. The mandible was misaligned with the upper jaw. It was skewed to the left and the tip of the lower jaw met the left cusp area on the upper jaw. The upper jaw on the left side had been worn, suggesting this was either an old injury or a congenital malformation. The turtle otherwise appeared healthy. It was photographed and released.

This observation confirms that wood turtles continue to exist on Fort Belvoir. However, like Ernst et al. (1997), we are unable to determine if a viable population exists here. The observation of an old male turtle and no evidence of reproduction suggest that, if a population does occur here, it may consist only of old individuals. It is also possible that this male had moved downstream in the creek over some unknown period of time from a population upstream. However, most areas upstream from Fort Belvoir are highly urbanized and unlikely to support a population

of this species. If the turtle we observed was the one originally seen by Ernst et al. (1997), then it would have had to leave one drainage and enter the one in which it was found. It is unlikely that this turtle moved overland from the Jackson Abbott Wetland Refuge because it would have had to cross several heavily traveled urban roads. Our observation, combined with that of Ernst et al. (1997), suggests that an old population of unknown size exists currently or did exist through the 1990s in this area or, if in fact this is the same one that Ernst et al. (1997) observed, that this single individual has survived for over a decade and has a large home range in this urban system. We cannot rule out the possibility that this was a former captive individual, although the condition of its shell suggests a long exposure to environmental stress. Other observations need to be reported so that state and military base wildlife biologists can better determine how to manage Fort Belvoir for this rare species. It is also obvious that additional and extensive surveys are necessary to ascertain the population status of wood turtles in the eastern portion of Fairfax County.

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Figure 1. Adult male *Clemmys insculpta* from Fort Belvoir, Fairfax County, Virginia. Photograph by John Pilcicki.

FIELD NOTES

Elaphe guttata guttata (Corn Snake). VA: Scott Co., Co. Rt. 689, 3 km E jct. Co. Rt. 691. 15 June 1998. Richard L. Hoffman.

The biotic similarity between the Piedmont of Virginia and that part of the state drained by headwaters of the Tennessee River system is pronounced and well-documented for many groups of organisms having basically austral distributions. Among reptiles may be mentioned the king snake (*Lampropeltis getula*) represented by different subspecies, and amphibians include the eastern narrow-mouthed toad (*Gastrophryne carolinensis*) (Mitchell, J. C. and K. K. Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication 1, Virginia Department of Game and Inland Fisheries, Richmond, Virginia. 122 pp.). It is now possible to add an additional snake to this list. Even though the presence of the corn snake in southwestern Virginia has long seemed probable from its distribution in adjacent states, the species has so far remained undetected there (Mitchell, J. C. 1994. The Reptiles of Virginia. Smithsonian Institution Press, Washington, D.C. 352 pp.; Mitchell and Reay, op. cit.).

On 15 June 1998, I found a DOR corn snake on County Route 689, two miles (3 km) east of its junction with County Route 691. The site is beside the North Fork Holston River, approximately eight river miles upstream from the U.S. Hwy. 58 bridge at Hiltons in Scott County, Virginia. Although the specimen was badly damaged, apparently run over several times, it was nonetheless possible to remove the skin (head and tail attached) in a useable, one-piece condition (VMNH 8748). As nearly as the condition justifies measurement, the snake was about 38 inches (950 mm) in total length, with a tail length of 5 inches (125 mm). It was a gravid female with four relatively intact large yolk masses (no shell material) still evident, possibly the complete complement for a snake of this size. The color pattern is typical for the species, with the dark reddish background color seen in northern populations and 38+8 dorsal spots. I could verify 223 ventral scales (the low count again a trait associated with northern individuals) and 48 (+1-2 more) subcaudals - extreme tip of the tail missing.

With the species long known from as far north (west of the Appalachians) as eastern Kentucky (Conant, R. 1975. A Field Guide to Reptiles and Amphibians of Eastern and Central North America. 2nd Ed. Houghton Mifflin Co., Boston. 429 pp.) and Knoxville, Tennessee (R. L. Hoffman,

unpubl. data), this record is scarcely noteworthy as a range extension. Further, I am advised by Dr. Floyd Scott (Austin Peay State University) that the species had already been taken even closer to Virginia, at a site 3 mi (5 km) north of Jefferson City, Jefferson Co., TN (Tulane University 17601), only 60 miles (100 km) southwest of the Scott County locality. Perhaps its greater interest lies in emphasizing how much remains to be accomplished by continued inventory work in southwestern Virginia.

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Martinsville, Virginia 24112

Crotalus horridus (Timber Rattlesnake). VA:Highland Co., Jack Mountain, 869 m (2850 ft), 11 km S Monterey. 12 August 1999. James R. Webb.

A pair of intertwined timber rattlesnakes was observed at 1000 h in mixed hardwood forest on the west slope of Jack Mountain. The darker snake, the male, was coiled around the yellow one, the female, with his hemipenes inserted into her cloaca. They stayed together with their tails intertwined until at least 1400 h. By 1600 h they had moved under a rock about 5 m away but no longer appeared to be actively mating. They stayed in this location until the next day. By mid-day on the 13th, the male was observed apparently searching for the female, as he moved quickly to the original mating location, back to the rock, and then away from the observers. Martin (1992. Phenology of the timber rattlesnake [*Crotalus horridus*] in an unglaciated section of the Appalachian Mountains. Pp. 259-277 in J. A. Campbell and E. D. Brodie, Jr. [eds.]. Biology of the Pitvipers. Selva, Tyler, Texas) noted that male-female pairings peaked in early August in the Appalachian Mountains but that some also occurred in July. The earliest known mating date for this species in Virginia is 21 August (Martin, op. cit.; Mitchell, J. C. 1994. The Reptiles of Virginia, Smithsonian Institution Press, Washington, D.C. 352 pp.). Our observation represents the earliest date known for mating in this species in the Commonwealth.

JOSEPH C. MITCHELL

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JAMES R. WEBB

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Field Notes

***Eumeces laticeps* (Broad-headed Skink).** VA: Accomack County, Country Club Road, Onancock/Pungoteague. 27 June 1976. Bobby Swain.

A single location for this species exists for the Virginia portion of the Eastern Shore near Nassawaddox in Northampton County (Mitchell, J. C. 1994. *The Reptiles of Virginia*. Smithsonian Institution Press, Washington, D.C. 352 pp.; Mitchell, J. C. and K. K. Reay, 1999. *Atlas of Amphibians and Reptiles in Virginia*. Special Publication No. 1, Virginia Department of Game and Inland Fisheries, Richmond, Virginia. 122 pp.). One of us (RC) was sent a slide of an adult male in 1976 that was potentially difficult to identify. The skink was perched on the side of a brick structure. Its large body size (ca. 95 mm SVL based on measuring the width of two bricks that nearly outlined its snout to vent length, well exceeding the maximum known length for the five-lined skink, *Eumeces fasciatus*), lack of dorsal stripes, and the bright orange head coloration confirmed that this individual was a male *E. laticeps*.

This record is the first for Accomack County and the second known for Virginia's Eastern Shore. However, at least 14 localities have been verified for the Maryland portion of the Delmarva Peninsula (Harris, H. S., Jr. 1975. *Distributional survey (Amphibia/Reptilia): Maryland and the District of Columbia*. *Bulletin of the Maryland Herpetological Society* 11:73-167). These records and the imprecise locality for our record suggest that there are other locations that could be searched along the western side of Accomack County for this species. The slide is deposited in the Virginia Herpetological Society archives.

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ROGER CONANT

Department of Biology
University of New Mexico
Albuquerque, New Mexico 87131

Hyla cinerea (Green Treefrog). VA: Stafford Co., ca. 2.5 km E Stafford Courthouse; partially wooded lot on Honor Court, N of Hope Road (County Route 687). 1 October 1999. Andrew K. Zadnik.

In response to a citizen's call to the Virginia Department of Game and Inland Fisheries a new county record for the green treefrog was documented. On several evenings the caller had seen at least a dozen bright green frogs on the front of her house. Upon investigating the call about 1900 h on 1 October 1999, two adult green treefrogs were observed clinging to the house and under the front porch. The weather conditions were cool and clear, although it had rained several days earlier. A voucher photograph (color slide) was taken and has been deposited in the VHS archives. In July 1999, green treefrogs were heard by Lisa Sausville and Andrew Zadnik during a frog call survey route along Brooke Road at the point where it crosses Potomac Creek. That site is approximately 5 miles (8 km) south of where this species was observed in October.

The green treefrog is found throughout Virginia's Coastal Plain from the Delmarva Peninsula south (Conant, R. and J. T. Collins. 1991. A Field Guide to Reptiles and Amphibians, Eastern and Central North America. Third edition. Houghton Mifflin Co., Boston. 450 pp.). However, there are no confirmed records from Stafford County (Mitchell, J. C. and K. K. Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication No. 1, Virginia Department of Game and Inland Fisheries, Richmond, Virginia. 122 pp.; Tobey, F. J. 1985. Virginia's Amphibians and Reptiles, a Distributional Survey. Virginia Herpetological Society, Purcellville, Virginia. 114 pp.). This is the first confirmed record for the county.

ANDREW K. ZADNIK

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Field Notes

Amphiuma means (Two-toed Amphiuma). VA: Surry Co., unnamed tributary of Hunnicut Creek N of intersection with Lawnes Creek Road, approximately 1.2 km E State Rt. 650. 17 April 2000. Robert S. Greenlee.

At approximately 1430 h on 17 April 2000 a two-toed amphiuma was found 30 m upstream of a road crossing in an unnamed tributary of Hunnicut Creek on Hog Island Wildlife Management Area, Surry County. Weather conditions were overcast with intermittent light rain, and an air temperature of $\sim 23^{\circ}\text{C}$. The site is a broad, flooded riparian swamp, characterized by large quantities of emergent and submerged aquatic vegetation, and with some standing hardwoods, primarily red-maple (*Acer rubrum*). The specimen, measuring 372 mm SVL and 485 mm TL, was found in the shallow margins (water depth ca. 10 cm) on top of a substratum of decaying aquatic vegetation and leaves. Water temperature was 19°C .

There are no previous records of this species from Surry County (Mitchell, J. C. and K. K. Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Virginia Department of Game and Inland Fisheries, Richmond, Virginia. 122 pp.). The closest records on the south side of the James River are from the City of Suffolk and Isle of Wight County to the southeast, and Prince George County to the west. The specimen was released; photographs have been deposited in the VHS archives at the Virginia Museum of Natural History.

ROBERT S. GREENLEE

Virginia Department of Game and Inland Fisheries
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Suffolk, Virginia 23434

President's Corner

For my first President's Corner, a little introduction: My name is Bob Greenlee, and I am a fisheries biologist with the Virginia Department of Game and Inland Fisheries working out of the Suffolk office as a District Biologist. My field study interests include the aquatic systems occurring in the Coastal Plain of Virginia, and the variety of fauna occurring in, and in association with, these streams, swamps and vernal pools. My previous work as an aquatic analyst for the Department and my interest in Virginia's herpetofauna brought me in contact with Mike Pinder. It is through Mike that I became active in the VHS, eventually becoming President-Elect. In my experience, the diversity of VHS membership is unique among scientific societies, with individuals ranging in age from young children to the most senior of our members, and with professionals and amateurs alike coming together based on a common interest in herpetology. I look forward to serving as your society President over the next two years.

I would like to take this opportunity to thank Mike Pinder for his excellent service to the society as President over the past two years. Mike conceived of, and brought about the VHS Lifetime Achievement Award. In 1998, VHS founding father Frank Tobey was honored as the first recipient of this prestigious award, and the following year, at the 1999 fall symposium, Richard Hoffman was honored. During Mike's reign as President the VHS established a student travel fund, affording students an opportunity to attend meetings at reduced costs. As President, Mike was proactive, seeking to modify the VHS constitution, and pushing for change or action where he saw the need. Under Mike's leadership the VHS benefitted from two years of informative and profitable fall meetings and symposiums. For the 40th anniversary of VHS in 1998, Mike organized an outstanding symposium, Reptile and Amphibian Conservation: Past, Present and Future. Frank Tobey provided members with an informative oral history of the events leading up to and following the formation of the VHS. Other speakers included Ronald Heyer, William "Marty" Martin, and Joseph Mitchell.

I would also like to thank Shay Garriock, who served as an outstanding Secretary/Treasurer during 1998 and 1999. Shay updated and balanced the VHS books, not a trivial task. In addition, Shay was diligent in bringing VHS membership rolls in line with actual dues-paying members (active members), cutting the costs of mailing *Catesbeiana* and the newsletter to inactive

President's Corner

members. Shay also took on the role of webmaster for the Society's Internet site, updating and modifying it on a regular basis, and making the site an informative resource for VHS members and non-members alike. Shay's tenure will be a hard act to follow. However, the current Secretary/Treasurer, Paul Sattler, has shown himself to be very competent in the service of VHS in the past, and has volunteered to do so again.

And now to the future: I look forward to working with Paul Sattler our current Secretary/Treasurer and Jason Gibson, our President-Elect, to insure the VHS continues to develop and mature as a society. I have a few goals for the next two years. First, I propose amending the VHS constitution to modify the structure of the VHS executive committee, and the mechanism by which VHS officers are nominated and elected. I propose an office of Vice President in lieu of a President-Elect. Currently the position of President-Elect requires a six-year commitment to the society, a commitment no student, and few other members, is likely to be able to make. These officers (Secretary/Treasurer, Vice President, and President) will continue to serve two-year terms, the President serving as Past President after completion of the term. Restructuring the executive committee to include a Secretary/ Treasurer, Vice President, President, and Past President, all with two-year terms, will allow student members to become active participants as officers in the society.

Rather than hold elections at the fall meetings, I propose to form a nominating committee, which will seek nominations, select nominees, and place ballots in the summer newsletter prior to the end of a given term. Members will be asked to mail or e-mail ballots in prior to the fall meeting. New officers will then be announced at the fall meeting. I will be presenting my ideas and seeking your comments at this year's spring business meeting, then posting details of proposed amendments in the summer newsletter. The amendments will be voted on at this year's fall meeting.

I would like to see the Virginia Herpetological Society (VHS) develop a self-sustaining fund to further support graduate and/or undergraduate research. I believe the treasury currently has monies in it that could be transferred to a mutual fund, or other money market account. The interest earned by these funds would then be used for this purpose. I plan to seek suggestions on this from members at our spring meeting, place an announcement in the summer

newsletter, and place the proposal before the members at the fall business meeting.

I would like to see our Society concentrate efforts on outreach, particularly to universities and high schools in an effort to increase student involvement in the Society. Also, we should continue to insure that mechanisms are in place such that all students wishing to attend VHS meetings are afforded the opportunity. We all know the students and other young herpetologists of today are the future of the VHS.

Soapbox time: It is up to each of you to take the opportunity to interact with other individuals having similar interests in herpetology by attending Society meetings. I would take this opportunity to encourage you to do so, particularly those members who may not have taken the opportunity in recent years. Come on out to the meetings and see why it is you joined the Society in the first place. Membership involvement is what keeps this organization going, without it the VHS will stagnate, with it the VHS will continue to develop as a society. Increasing membership involvement will allow the Society to further expand its role and contributions in the field of herpetology. As a member of the VHS you are entitled to two newsletters and two issues of *Catesbeiana* per year, a quality fall symposium, and an opportunity to join an adventure-filled spring survey. If you do not receive one of the publications please feel free to contact me at (757) 255-2299 and I will see that you receive a copy.

Bob Greenlee
President

Dues Reminder

Membership in the Virginia Herpetological Society is on a calendar year basis (expires annually on December 31). If the date on your mailing label is highlighted, our records indicate that you have not paid dues for 2000 and this is the last publication you will receive from the VHS. See the last page of this bulletin for the membership application/renewal form. Save postage by paying your dues at the Spring Meeting if you are planning to attend this exciting event.

Minutes from the VHS Fall Meeting

October 23, 1999

Three Lakes Nature Center

Richmond, Virginia

The meeting began with distribution of the meeting agenda and call to order by VHS President Mike Pinder. Fifteen members were present. The minutes from the Spring 1999 meeting were approved as published in issue 19(2) of *Catesbeiana*. Shay Garriock gave the journal Editor's report in place of Steve Roble: 180 copies of *Catesbeiana*, Volume 19, Issue 2, 40 pages, were printed at a cost of \$340.86. Total postage was \$80.55: four copies were hand-delivered and 143 copies were mailed at 55 cents per copy (plus two foreign addresses). Mike Pinder presented the Newsletter Editor's report: 150 copies of Volume 9, Number 2, were mailed to membership at a postage cost of \$57.18. Several copies were hand delivered. Mike announced that Lori Williams would be taking over editing of the newsletter beginning with the next issue. Shay acknowledged John White's role in starting up the VHS Website Bulletin Board. The bulletin board is a medium for VHS members and the public to post comments and questions concerning Virginia Herpetology, VHS activities, etc. The board is monitored for screening of unrelated content. Shay also announced that he wished to relinquish his responsibility of managing the website, and was searching for someone to take over this role.

There was no unfinished business to discuss. The first topic of new business was the election of the new VHS President-Elect and Secretary/Treasurer. Paul Sattler was nominated for the office of Secretary/Treasurer, but was uncontested. The nomination was seconded and a vote was unanimous in favor. Jason Gibson was the sole nominee for the office of President-Elect, and this vote was also unanimous in favor. Bob Greenlee assumed the office of VHS President, replacing Mike Pinder. Paul Sattler replaced Shay Garriock as Secretary/Treasurer and Jason Gibson began his term as President-Elect.

The next topic of new business was the *Atlas of Amphibians and Reptiles in Virginia*. Mike announced that it was not economically feasible for the VHS to purchase and then resell the book to VHS members at cost, as was originally intended. However, there would be several copies for sale during the meeting. Mike then asked the membership to consider donating \$100 of VHS Treasury

to the Declining Amphibian Populations Task Force, for publication of *Conservation and Status of Amphibians in the United States*. The book, according to Joe Mitchell, will include species accounts of all amphibian species in the U. S., as well as regional and topical essays concerning amphibian decline. A motion was made to proceed with the donation and was seconded. Those present voted unanimously in favor. Discussion ensued concerning new bumper stickers that advertise a VHS logo. It was then suggested that window decals might be a better option for people who dislike using bumper stickers, and this idea received general approval. Faye Farrell agreed to check into the cost of purchasing VHS window decals.

At the beginning of the discussion concerning the next spring survey location, Faye Farrell presented a map highlighting potential sites in the Northern Neck region of Virginia. She listed five locations, all within 30 minutes of each other, that could be targeted in one day. Steve Roble noted other possibilities in that area including the new Rappahannock River National Wildlife Refuge. Joe Mitchell mentioned that areas in the state presenting "gaps" in herp distribution knowledge were the Northern Neck, Southside Virginia, and Pittsylvania, Culpeper, and Halifax counties. It was agreed upon by unanimous vote that the Northern Neck region would be further investigated as a potential survey site in 2000.

Shay began discussion concerning development of a new membership dues policy that would require members to pay their dues fees within the first six months of each calendar year. Current policy allows members to pay as late as six months after completion of the calendar year before removal from the membership list. Non-paying members have been receiving publications up to 18 months after the beginning of the calendar year. It was tentatively decided that any member failing to pay dues within the first six months of the calendar year will not receive publications thereafter, but should remain on the membership list. Dues reminder cards will be sent out before the end of the calendar year and then again early in the year. It will be left up to the next group of officers to adopt any necessary proposals for amendments concerning dues payment.

The meeting was adjourned by Mike Pinder.

Shay Garriock
Secretary/Treasurer

Treasurer's Report

April 7, 2000

November Balance on hand **\$4731.83**

Receipts:

Membership Dues ✓ \$1064.00 ÷ 105
Checking Account Interest ✓ \$ 6.06

Total Receipts **\$1070.06**

Disbursements:

Postage for Newsletter 10(1) ✓ \$ 61.97
Shay Garriock ✓ \$ 13.74
SSAR (books) ✓ \$ 123.00

Total Disbursements **\$ 198.71**

Balance on Hand April 7, 2000

Checking **\$3921.74**
Savings (Snake Brochure Fund) **\$1681.43**

Total **\$5603.17**

The society has a current membership of 126
New members since last Treasurer's Report = 2

Paul Sattler
Secretary/Treasurer

Lifetime Achievement Awards

At the Fall 1999 meeting, the VHS recognized Dr. Richard L. Hoffman, Curator of Recent Invertebrates at the Virginia Museum of Natural History, as the second recipient of the society's Lifetime Achievement Award. Dr. Hoffman was also the featured speaker at the meeting. The previous year, on the occasion of the society's 40th Anniversary Meeting, Franklin J. Tobey, co-founder and past secretary (1958-1980) of the VHS, longtime editor of the VHS Bulletin, and coordinator of the Virginia Herpetological Survey (original atlas project), was the first recipient of this award. Members interested in the history of the VHS should consult the following published sources.

Tobey, F. J. 1985. Virginia's Amphibians and Reptiles, a Distributional Survey. Virginia Herpetological Survey, Virginia Herpetological Society, Purcellville, Virginia. 114 pp. (see especially pages 19-24, 113-114)

Tobey, F. J. 1988. VHS celebrates its thirtieth anniversary. *Catesbeiana* 8(2): 21-26.

Richard Hoffman was a founding member of the VHS and is a past president of the society. He has maintained a life-long interest in the herpetofauna of Virginia despite pursuing a career that has led to his recognition as a worldwide authority on the systematics of millipeds and a leading authority on the invertebrate fauna and biogeography of Virginia and the southern Appalachians. To date, he has published 56 papers on amphibians and reptiles, all directly relevant to the Virginia fauna, in a variety of national and regional journals over a period spanning more than a half-century. His first seven papers were published while he was still a teenager. Among his many herpetological discoveries are several species new to Virginia (e.g., *Eumeces anthracinus*, *Desmognathus marmoratus*) or new to science (*Plethodon hoffmani*), the latter of which was named in his honor.

Herpetological Publications of Richard L. Hoffman (through April 2000; compiled by Steven M. Roble)

Hoffman, R. L. 1944. *Eumeces anthracinus* (Baird) in Virginia. Proceedings of the Biological Society of Washington 57(25): 123-124.

Hoffman, R. L. 1944. Notes on *Cnemidophorus sexlineatus* in Virginia. Proceedings of the Biological Society of Washington 57(25): 124-125.

Herpetological Publications of Richard L. Hoffman

- Hoffman, R. L. 1945. Notes on the herpetological fauna of Alleghany County, Virginia. *Herpetologica* 2(4): 199-205.
- Hoffman, R. L. 1945. Range extension for *Eumeces inexpectatus* Taylor. *Proceedings of the Biological Society of Washington* 58(32): 131-132.
- Ackroyd, J. F. and R. L. Hoffman. 1946. An albinistic specimen of *Pseudacris feriarum*. *Copeia* 1946(4): 257-258.
- Hoffman, R. L. 1946. The voice of *Hyla versicolor* in Virginia. *Herpetologica* 3(4): 141-142.
- Hoffman, R. L. 1947. Distribution of two salamanders in Virginia. *Herpetologica* 4(2): 67-68.
- Hoffman, R. L. and H. L. Kleinpeter. 1948. Amphibians from Burkes Garden, Virginia. *American Midland Naturalist* 39(3): 602-607.
- Hoffman, R. L. and H. I. Kleinpeter. 1948. A collection of salamanders from Mount Rogers, Virginia. *Journal of the Washington Academy of Science* 38(3): 106-108.
- Hoffman, R. L. 1949. A geographic variation gradient in *Cnemidophorus*. *Herpetologica* 5(4): 149.
- Hoffman, R. L. 1949. The turtles of Virginia. *Virginia Wildlife* 10(8): 16-19.
- Fowler, J. A. and R. L. Hoffman. 1951. *Gastrophryne carolinensis carolinensis* (Holbrook) in southwestern Virginia. *Virginia Journal of Science* 2(2): 101.
- Hoffman, R. L. 1951. A new subspecies of salamander from Virginia. *Journal of the Elisha Mitchell Scientific Society* 67(2): 249-253.
- Hoffman, R. L. 1953. Interesting herpetian records from Camp Pickett, Virginia. *Herpetologica* 8(4): 171-174.

- Hoffman, R. L. and L. Hubricht. 1954. Distributional records for two species of *Plethodon* in the southern Appalachians. *Herpetologica* 10(3): 191-193.
- Hoffman, R. L. 1955. On the occurrence of two species of hylid frogs in Virginia. *Herpetologica* 11(1): 30-32.
- Hoffman, R. L. 1955. Two additions to the amphibian fauna of Burkes Garden, Virginia. *American Midland Naturalist* 53(1): 256.
- Hoffman, R. L. and R. B. Hoffman. 1956. *Leurognathus marmorata* Moore in Virginia. *Natural History Miscellanea, Chicago Academy of Sciences* 153: 1-2.
- Hoffman, R. L. 1957. A new subspecies of the teiid lizard *Cnemidophorus sexlineatus* (Linnaeus) from the eastern United States. *Journal of the Washington Academy of Science* 47(5): 351-356.
- Hoffman, R. L. 1957. A new name for the race-runner lizard of the middle Atlantic states (Tejidae). *Journal of the Washington Academy of Science* 47(12): 423.
- Hoffman, R. L. 1967. Distributional records for three species of *Plethodon* in Virginia. *Radford Review* 21(3): 201-214.
- Hoffman, R. L. 1973. Ground skink distribution. *VHS Bulletin* 71: 6.
- Hoffman, R. L. 1977. Scarlet snake record for western Virginia: others? *VHS Bulletin* 83: 3.
- Hoffman, R. L. 1977. The two-lined salamanders: a winter research project. *VHS Bulletin* 84: 1-3.
- Hoffman, R. L. 1979. A new locality (county) record for the pine woods treefrog in Virginia. *VHS Bulletin* 88: 1-2.
- Hoffman, R. L. 1979. Shovel-nosed salamander. Pp. 382-383 in D. W. Linzey (editor). *Endangered and Threatened Plants and Animals of Virginia*. Virginia Polytechnic Institute and State University, Blacksburg, VA.

Herpetological publications of Richard L. Hoffman

- Hoffman, R. L. 1980. *Pseudacris brachyphona*. Catalogue of American Amphibians and Reptiles 234.1-234.2. Society for the Study of Amphibians and Reptiles.
- Hoffman, R. L. 1981. On the occurrence of *Pseudacris brachyphona* (Cope) in Virginia. *Catesbeiana* 1(1): 9-13.
- Hoffman, R. L. 1983. Salamanders from Burke's Garden, Virginia. *Catesbeiana* 3(1): 3-12.
- Hoffman, R. L. 1983. *Pseudacris brimleyi*. Catalogue of American Amphibians and Reptiles 311.1-311.2. Society for the Study of Amphibians and Reptiles.
- Hoffman, R. L. 1984. *Necturus maculosus* in the New River? *Catesbeiana* 4(1): 11.
- Hoffman, R. L. 1985. The herpetofauna of Alleghany County, Virginia. *Catesbeiana* 5(1): 3-12.
- Hoffman, R. L. 1985. The herpetofauna of Alleghany County, Virginia, Part 2. Class Amphibia. *Catesbeiana* 5(2): 3-13.
- Hoffman, R. L. 1986. The herpetofauna of Alleghany County, Virginia, Part 3. Class Reptilia. *Catesbeiana* 6(1): 4-10.
- Hoffman, R. L. 1986. *Scincella laterale* on Warm Springs Mountain: a preposterous distributional record. *Catesbeiana* 6(2): 11-13.
- Hoffman, R. L. 1987. The herpetofauna of Alleghany County, Virginia, Part 4. Biogeographic inferences. *Catesbeiana* 7(1): 5-14.
- Hoffman, R. L. 1987. Four species included on the Virginia "endangered" list. *Catesbeiana* 7(2): 21.
- Hoffman, R. L. 1988. Field Notes: *Plethodon yonahlossee* (Yonahlossee Salamander). *Catesbeiana* 8(1): 16.

Hoffman, R. L. 1988. Field Notes: *Lampropeltis getulus niger* (Black Kingsnake). Catesbeiana 8(2): 32.

Hoffman, R. L. 1988. *Hyla femoralis*. Catalogue of American Amphibians and Reptiles 436.1-436.3. Society for the Study of Amphibians and Reptiles.

Buhlmann, K. A. and R. L. Hoffman. 1990. Geographic Distribution: *Ambystoma tigrinum tigrinum* (Eastern Tiger Salamander). Herpetological Review 21(2): 36.

Hoffman, R. L. 1990. Field Notes: *Gastrophryne carolinensis carolinensis* (Eastern Narrow-mouthed Toad). Catesbeiana 10(2): 44.

Hoffman, R. L. 1990. Field Notes: *Rana utricularia* (Southern Leopard Frog). Catesbeiana 10(2): 44-45.

Hoffman, R. L. 1991. Field Notes: *Hyla versicolor versicolor* (Eastern Grey Treefrog); *Hyla chrysoscelis* (Cope's Gray Treefrog). Catesbeiana 11(2): 40-41.

Hoffman, R. L. 1991. Field Notes: *Gastrophryne carolinensis carolinensis* (Eastern Narrow-mouthed Toad). Catesbeiana 11(2): 41-42.

Hoffman, R. L. 1992. The range of *Plethodon yonahlossee* in Virginia: defined at last? Catesbeiana 12(1): 3-8.

Hoffman, R. L. 1992. Anuran population declines in western Virginia. Catesbeiana 12(2): 34-35.

Hoffman, R. L. 1993. Field Notes: *Pseudotriton montanus* (Eastern Mud Salamander). Catesbeiana 13(2): 46-47.

Hoffman, R. L. and J. C. Mitchell. 1994. Paul R. Burch's herpetological collection at Radford College, Virginia: a valuable resource lost. Catesbeiana 14(1): 3-12.

Hoffman, R. L. 1994. Field Notes: *Hyla squirella* Bosc (Squirrel Treefrog). Catesbeiana 14(1): 14-15.

Herpetological publications of Richard L. Hoffman

Hoffman, R. L. 1994. Book Review: The Reptiles of Virginia by Joseph C. Mitchell. *Banisteria* 4: 34-36.

Hoffman, R. L. 1996. *Hyla chrysoscelis* also crosses the Blue Ridge: *sic juvat transcendere montes*. *Catesbeiana* 16(1): 3-8.

Hoffman, R. L. 1996. Book Review: Reptiles of North Carolina by William M. Palmer and Alvin L. Braswell. *Banisteria* 8: 57-59.

Hoffman, R. L. and J. C. Mitchell. 1996. Records of anurans from Greensville County, Virginia. *Banisteria* 8: 29-36.

Mitchell, J. C., K. A. Buhlmann and R. L. Hoffman. 1996. Predation of marbled salamander (*Ambystoma opacum* [Gravenhorst]) eggs by the milliped *Uroblaniulus jerseyi* (Causey). *Banisteria* 8: 55-56.

Hoffman, R. L. 2000. Field Notes: *Elaphe guttata guttata* (Corn Snake). *Catesbeiana* 20(1): 39-40.

Other papers of general interest:

Hoffman, R. L. 1969. The biotic regions of Virginia. Pp. 23-62 in *The Insects of Virginia*, No. 1. Research Division Bulletin 48, Virginia Polytechnic Institute and State University, Blacksburg, VA.

Hoffman, R. L. 1987. Local sites of special concern in Virginia. *Virginia Journal of Science* 38(4): 399-408.

Woodward, S. L. and R. L. Hoffman. 1991. The nature of Virginia. Pp. 23-48 in K. Terwilliger (coordinator). *Virginia's Endangered Species*. McDonald and Woodward Publishing Company, Blacksburg, VA.

Hoffman, R. L. 1999. Appalachian biogeography: a personal retrospection. Pp. xi-xiv in R. P. Eckerlin (editor). *Proceedings of the Appalachian Biogeography Symposium*. Virginia Museum of Natural History Special Publication Number 7, Martinsville, VA.

ANNOUNCEMENT

SPRING 2000 MEETING OF THE VIRGINIA HERPETOLOGICAL SOCIETY

The VHS will be having its spring meeting on May 19-20, 2000. This year we will be surveying several diverse natural areas found in the eastern Northern Neck and Middle Peninsula. Potential survey sites include the Big Island property on Dragon Run, Hickory Hollow, Belle Isle State Park, Bush Mill Stream Natural Area Preserve, and a number of other locations to be announced. The region provides a diversity of habitats typical of the lower Coastal Plain. These habitats include wooded swamps, streamside riparian areas, marshes, marshy borders along ponds and lakes, abandoned agricultural lands, and edge habitat. A quick look at the *Atlas of Amphibians and Reptiles in Virginia* will reveal that a number of county records are possible during this survey.

Schedule:

Friday May 19, 2000

- 7:00 PM Business meeting - Lancaster County Library, White Stone
- 7:45 PM Break (snacks and drinks provided)
- 8:00 PM Slide show of potential species and initial coordination
meeting for survey on Saturday
- 8:45 PM Adjourn

Saturday May 20, 2000

- 7:30 AM Pancake Breakfast served at the Lively YMCA thanks
to the Ruritan Club
- 8:00 AM Coordination meeting for survey (Lively YMCA)
- 8:30 AM Break into survey groups and travel to designated
survey locations
- 12:30 PM Free to survey outside of initial survey locations
- 5:30 PM Meet at Lively YMCA outdoor pavilion (or other TBA)
to compile survey reports, compare swamp stories and
adventures, and photograph collected specimens

Spring Meeting Announcement

Accommodations:

Lodging is available at the following:

- Whispering Pines Motel in White Stone - (804) 435-1101
- Pilot House Inn in Topping, Middlesex County - (804) 758-2262
- Bay Motel in Lancaster County between Reedville and Burgess - (804) 776-9224
- Windmill Point Resort - (804) 435-1166
- Best Western Inn in Warsaw (804) 333-1700
- Tides Inn and Lodge in Irvington (804) 438-5000, (804) 438-6000
- Kendall Hall Inn in Irvington (804) 6927
- Deltaville Dockside Inn (804) 776-9224

NOTE: Rooms will book rapidly, so plan accordingly. Get your reservations ASAP.

Directions to White Stone, Virginia:

From Richmond:

Take Route 360 to Warsaw, turn right on Route 3 towards Kilmarnock. Continue on Route 3 through Kilmarnock to White Stone. Or, take I-64 to Route 33. Take Route 33 to Route 3. Continue on Route 3 to White Stone.

From Tidewater:

From I-64 follow Route 17 to Route 3. Travel on Route 3 to White Stone.

Directions to Lively, Virginia:

Lively is located on Route 3 approximately 12 miles northwest of White Stone. The Lively YMCA is located on Route 201 south.

Equipment list:

- Sampling equipment: insect repellent, taxonomic identification guides, waders, seines, dip nets, collection jars/bags, snake stick, snake bag, camera.
- Raingear and other clothing suitable for changeable May weather

Potential Species List for the Region

Amphibians

Salamanders

<i>Ambystoma maculatum</i>	Spotted salamander
<i>Ambystoma opacum</i>	Marbled salamander
<i>Desmognathus fuscus</i>	Northern dusky salamander
<i>Eurycea cirrigera</i>	Southern two-lined salamander
<i>Eurycea guttolineata</i>	Three-lined salamander
<i>Hemidactylium scutatum</i>	Four-toed salamander
<i>Notophthalmus viridescens viridescens</i>	Red-spotted newt
<i>Plethodon cinereus</i>	Red-backed salamander
<i>Plethodon cylindraceus</i>	White-spotted slimy salamander
<i>Pseudotriton montanus montanus</i>	Eastern mud salamander
<i>Pseudotriton ruber ruber</i>	Northern red salamander
<i>Siren intermedia intermedia</i>	Eastern lesser siren
<i>Siren lacertina</i>	Greater siren

Anurans

<i>Acris crepitans crepitans</i>	Eastern cricket frog
<i>Bufo americanus americanus</i>	Eastern American toad
<i>Bufo fowleri</i>	Fowler's toad
<i>Gastrophryne carolinensis</i>	Eastern narrow-mouthed toad
<i>Hyla chrysoscelis</i>	Cope's gray treefrog
<i>Hyla cinerea</i>	Green treefrog
<i>Hyla femoralis</i>	Pine woods treefrog
<i>Hyla gratiosa</i>	Barking treefrog
<i>Pseudacris brimleyi</i>	Brimley's chorus frog
<i>Pseudacris crucifer crucifer</i>	Northern spring peeper
<i>Pseudacris feriarum feriarum</i>	Upland chorus frog
<i>Rana catesbeiana</i>	American bullfrog
<i>Rana clamitans melanota</i>	Northern green frog
<i>Rana palustris</i>	Pickerel frog
<i>Rana sphenoccephala</i>	Southern leopard frog
<i>Rana sylvatica</i>	Wood frog
<i>Rana virgatipes</i>	Carpenter frog
<i>Scaphiopus holbrookii</i>	Eastern spadefoot

Spring Meeting Announcement

Reptiles

Turtles

<i>Chelydra serpentina serpentina</i>	Eastern snapping turtle
<i>Chrysemys picta picta</i>	Eastern painted turtle
<i>Clemmys guttata</i>	Spotted turtle
<i>Kinosternon baurii</i>	Striped mud turtle
<i>Kinosternon subrubrum subrubrum</i>	Eastern mud turtle
<i>Malaclemys terrapin terrapin</i>	Northern diamond-backed terrapin
<i>Pseudemys rubriventris</i>	Northern red-bellied cooter
<i>Sternotherus odoratus</i>	Eastern musk turtle
<i>Terrapene carolina carolina</i>	Eastern box turtle

Lizards

<i>Cnemidophorus sexlineatus sexlineatus</i>	Eastern six-lined racerunner
<i>Eumeces fasciatus</i>	Five-lined skink
<i>Eumeces inexpectatus</i>	Southeastern five-lined skink
<i>Eumeces laticeps</i>	Broad-headed skink
<i>Ophisaurus attenuatus longicaudus</i>	Eastern slender glass lizard
<i>Sceloporus undulatus hyacinthinus</i>	Northern fence-lizard
<i>Scincella lateralis</i>	Little brown skink

Snakes

<i>Agkistrodon contortrix mokasen</i>	Northern copperhead
<i>Carphophis amoenus amoenus</i>	Eastern wormsake
<i>Cemophora coccinea copei</i>	Northern scarletsnake
<i>Coluber constrictor constrictor</i>	Northern black racer
<i>Diadophis punctatus</i>	Ring-necked snake
<i>Elaphe guttata guttata</i>	Corn snake
<i>Elaphe obsoleta obsoleta</i>	Black ratsake
<i>Farancia erytrogramma erytrogramma</i>	Common rainbow snake
<i>Heterodon platirhinos</i>	Eastern hog-nosed snake
<i>Lampropeltis calligaster rhombomaculata</i>	Mole kingsake
<i>Lampropeltis getula getula</i>	Eastern kingsake
<i>Lampropeltis triangulum triangulum</i>	Eastern milksake
<i>Nerodia sipedon sipedon</i>	Northern watersake
<i>Opheodrys aestivus</i>	Rough greensake
<i>Storeria dekayi dekayi</i>	Northern brownsake
<i>Storeria occipitomaculata occipitomaculata</i>	Northern red-bellied snake
<i>Thamnophis sauritus sauritus</i>	Eastern ribbonsake
<i>Thamnophis sirtalis sirtalis</i>	Eastern gartersake
<i>Virginia valeriae valeriae</i>	Eastern smooth earthsnake

MEMBERSHIP APPLICATION

I wish to _____ initiate _____ renew membership in the Virginia
Herpetological Society for the year _____ 2000 _____ 2001 _____ 2002.

Name _____

Address _____

_____ Phone _____

email address: _____

Dues Category: _____ Regular - \$15.00

_____ Family - \$20.00

_____ Under 18 - \$8.00

_____ Life - \$225.00

Interests: _____ Reptiles _____ Amphibians

_____ Distribution _____ Research

_____ Captive Husbandry

_____ Specifically _____

Make checks payable to the Virginia Herpetological Society and send to:
Dr. Paul Sattler, VHS Secretary/Treasurer, Department of Biology, Liberty
University, 1971 University Blvd., Lynchburg, VA 24502

Visit the VHS web site at: <http://vhsociety.home.mindspring.com/>

Field Notes

This section provides a means of publishing natural history information on Virginia's amphibians and reptiles that does not lend itself to full-length articles. Observations on geographic distribution, ecology, reproduction, phenology, behavior, and other topics are welcomed. Field Notes will usually concern a single species. The format of the reports is: Scientific name (followed by common name in parentheses), state abbreviation (VA), county and location, date(s) of observation, observer(s), data, and observations. The name(s) and address(es) of the author(s) should appear one line below the report. Consult the editor if your information does not readily fit this format. **ALL FIELD NOTES MUST INCLUDE A BRIEF STATEMENT EXPLAINING THE SIGNIFICANCE OF THE RECORD** (e.g., new county record) **OR OBSERVATION** (e.g., unusual or rarely observed behavior, extremely early or late seasonal record, abnormal coloration, etc.). Submissions that fail to include this information are subject to rejection. Relevant literature should be cited in the body of the text (see Field Notes in this issue for proper format). All submissions will be reviewed by the editor (and one other person if deemed necessary) and revised as needed; all changes must be approved by the author(s) before publication.

If the field note contains information on a new county (or state) record, verification is **REQUIRED** in the form of a voucher specimen deposited in a permanent museum (e.g., Virginia Museum of Natural History) or a color photograph (print or slide) deposited in the archives of the Virginia Herpetological Society. Photographs should be sent to the editor for verification and archiving purposes; the identity of voucher specimens must be confirmed by a museum curator or other qualified person. Include the specimen number if it has been catalogued. Prospective authors of distribution reports should consult Mitchell and Reay (1999. *Atlas of Amphibians and Reptiles in Virginia*), Mitchell (1994. *The Reptiles of Virginia*), Tobey (1985. *Virginia's Amphibians and Reptiles: A Distributional Survey*) and other recent literature to determine if they may have a new county record. Species identification for observational records (e.g., behavior) should be verified by a second person whenever possible.

The correct citation format is: Tobey, F. J. 1989. Field notes: *Coluber constrictor constrictor. Catesbeiana* 9(2): 35.

Photographs

High contrast black-and-white photographs of amphibians and reptiles will be considered for publication if they are of good quality and are relevant to an accompanying article or field note. Submissions should be no larger than 5 x 7 inches and printed on glossy paper. Published photographs will be deposited in the archives of the Virginia Herpetological Society.